Canadian Securities Institute
Moody's Analytics Training & Certification Services

VOLUME 1

CANADIAN SECURITIES COURSE

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THE CANADIAN SECURITIES INSTITUTE

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CANADIAN SECURITIES COURSE (CSC)®

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Course Introduction

THE CANADIAN SECURITIES COURSE

Congratulations for embarking on the Canadian Securities Course (CSC)! This foundational financial services credential is the leading industry standard and a stepping stone toward a comprehensive financial education. Whether you are a career-minded financial professional working towards one of CSI's designations or certifications, or simply looking to make more informed financial decisions, this course will help you achieve your goal.

Recognized as an industry benchmark, the CSC covers a diverse range of topics, while closely reflecting the ever-changing nature and current trends of the securities industry. The dynamic nature of the industry itself is a compelling reason to take the CSC. Merely ten years ago, for example, exchange-traded funds (ETFs) warranted only brief coverage because they were not prevalent in the marketplace. With this version of the course, ETFs are treated in depth to reflect the vital role they have come to play in the financial landscape.

Studying for this course requires focus, good study habits, and time commitment. Your challenge is to adopt good CSC-study habits, read the learning materials carefully and practice regularly with the various course learning components that help you see for yourself how well you understand the content. We highly recommend that you use all of the learning components we offer, including the textbook, online learning activities, online review questions, discussion boards, and *Frequently Asked Questions* (FAQs).

WHAT WILL YOU LEARN?

The CSC covers the three central elements of the Canadian securities industry:

1. Financial markets
2. Financial intermediaries
3. Financial products

Our goal is to help you understand the marketplace and introduce you to industry terminology and practices. We begin in Volume 1 with an introduction to the Canadian securities industry, the regulatory landscape, and the economy. From there, we move to the different types of markets and financial instruments; then we go on to explain the mechanics of securities transactions. In Volume 2, we begin with a discussion of fundamental and technical analysis. Next, we introduce the portfolio approach to investment management, and we discuss the many types of managed and structured products that can make up a portfolio. Other topics include taxation, ethics, the financial planning process, and, finally, the institutional marketplace.

Consider the topics in Volume 1 as the building blocks that form a base structure of knowledge in preparation for what you will learn in Volume 2.

Please note that Exam 1 covers the content of Volume 1, and Exam 2 covers the content of Volume 2.

What is the Big Picture?

Think of the financial markets as the engine of the economy. It is here that savings are transformed into investments, and these investments drive a nation’s growth. This vital economic function is based on a simple process—the transfer of money from those who have it (buyers of securities) to those who need it (sellers of securities).

Capital transfer at its simplest occurs when you deposit money into a bank account. Once you make a deposit, the bank can lend it to a business that needs funds. For example, the business may use borrowed funds to expand their operations or to become a publicly-traded company on a stock exchange. In return, the business pays interest on the borrowed funds, and you receive a portion of that interest in exchange for the use of your money.

Of course, the capital transfer process is more sophisticated in the financial markets, especially as the securities sold in these markets become increasingly complex.

In essence, the financial markets have evolved to work as follows:

- **Financial instruments**, such as stocks and bonds, are the tools used by buyers and sellers to transfer capital.
- **The marketplace** is the mechanism by which financial instruments are bought and sold.
- **Financial intermediaries**, such as investment dealers, make the transfer process faster and easier.

Together, these three components—instruments, markets, and intermediaries—facilitate the efficient allocation of capital. As such, they are the key elements of the securities industry, and for this reason, they form the foundation on which the CSC is built.

KEY CHAPTER FEATURES

Each chapter is organized around the following key learning features:

Feature	**Description**
Learning Objectives	The Learning Objectives show what you will be able to accomplish after studying the chapter. Be sure to read the learning objectives before you begin a chapter.
Key Terms	Understanding the terminology and jargon of the securities industry is an important part of your success in this course. To help in this regard, we provide a list of key terms at the start of each chapter. Each term is boldfaced in the chapter and is defined in the glossary at the end of the textbook.
Online Learning Activities	Each chapter has learning activities accompanying the text that are available online. To access the online components of your course, log in to your Student Profile at www.csi.ca.
Did You Know?	This feature provides important information, including facts, statistics, clarifications, and insights, that supports the chapter content. Make sure you read the concise material covered in the *Did You Know?* feature to keep your knowledge up to date

and be fully prepared to write your exams.

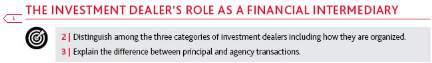
Dive Deeper takes you into insights that go a little deeper into the content to help you stay informed about financial markets and the industry, sharpen your understanding and expand your knowledge. Furthermore, by making a habit of staying informed, you will find it easier to reach your goal of becoming a competent and trusted participant in the securities industry.

Review Questions a series of multiple choice questions that allow you to test your knowledge of the subject. The review questions for each chapter are available in the online course.

Frequently Asked Questions you may have questions that have already been asked by previous students. Use the Frequently Asked Questions (FAQs), available in the online course for each chapter, to find answers for questions you might have.

KEY HEADING FEATURES

Textbook headings at all levels are in all caps and are differentiated by colour, size, and weight, as follows:

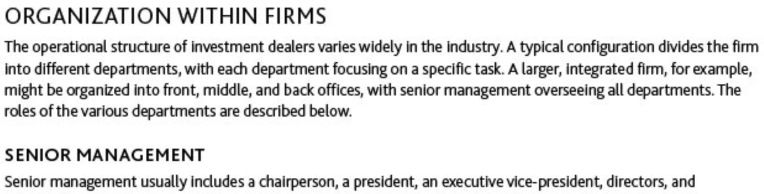


THE INVESTMENT DEALER'S ROLE AS A FINANCIAL INTERMEDIARY

2 | Distinguish among the three categories of investment dealers including how they are organized.

3 | Explain the difference between principal and agency transactions.

erlined text. They denote chapter sections objectives for that section.



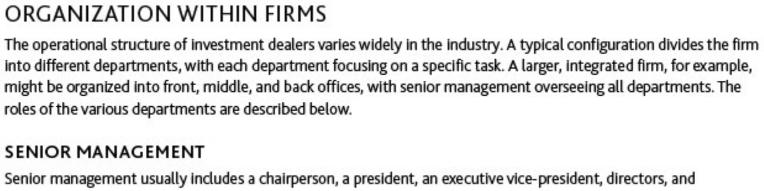
ORGANIZATION WITHIN FIRMS

The operational structure of investment dealers varies widely in the industry. A typical configuration divides the firm into different departments, with each department focusing on a specific task. A larger, integrated firm, for example, might be organized into front, middle, and back offices, with senior management overseeing all departments. The roles of the various departments are described below.

SENIOR MANAGEMENT

Senior management usually includes a chairperson, a president, an executive vice-president, directors, and

size and



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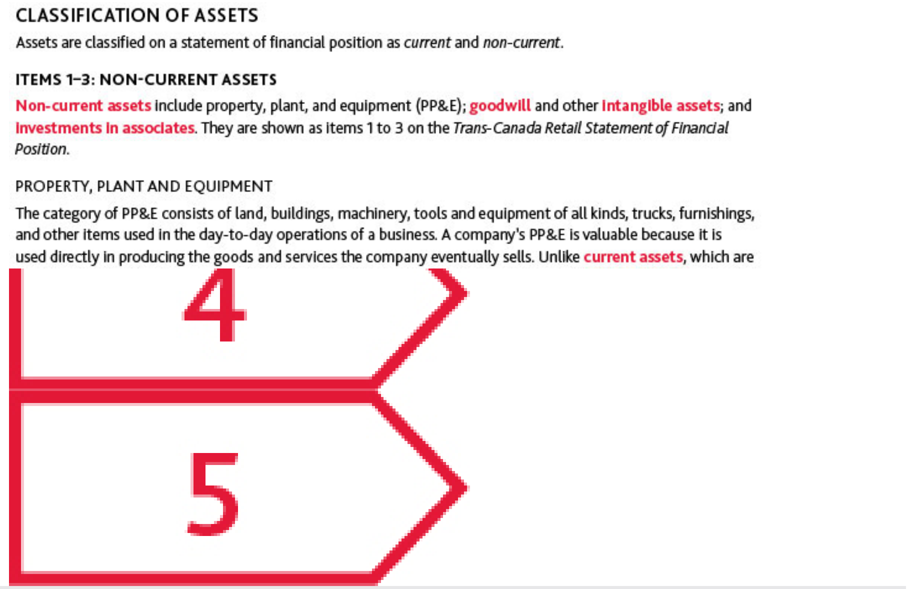
eadings by

Levels 4 and 5 headings are used where necessary within complex topics. Level 4 steps down in size, and level 5 steps down in both size and weight.



CLASSIFICATION OF ASSETS

Assets are classified on a statement of financial position as *current* and *non-current*.

ITEMS 1–3: NON-CURRENT ASSETS

Non-current assets include property, plant, and equipment (PP&E); **goodwill** and other **intangible assets**; and **investments in associates**. They are shown as items 1 to 3 on the *Trans-Canada Retail Statement of Financial Position*.

PROPERTY, PLANT AND EQUIPMENT

The category of PP&E consists of land, buildings, machinery, tools and equipment of all kinds, trucks, furnishings, and other items used in the day-to-day operations of a business. A company's PP&E is valuable because it is used directly in producing the goods and services the company eventually sells. Unlike **current assets**, which are

YouR Journey Through The Course

Although each student will develop an individual technique for studying, you may find the suggestions we offer below helpful.

The most important suggestion we can offer is that **all of the content in the textbook is examinable—with one exception: you will not be tested on information named *For Information Only***.

You may be more familiar with some areas of knowledge than others, but we advise strongly against skipping those sections. You can read the material in any order you choose, depending on your particular needs and level of familiarity with the content. However, we recommend instead that you avoid shortcuts and read all chapters in the sequence given.

Did You Know?

When you practice with our various assessment tools, keep in mind that your journey is NOT about finding the right answers and memorizing them. Rather, it is about knowing HOW to arrive at the right answer. Three crucial behaviours will help you succeed:

- Build good study habits.
- Turn the page only after you understand the concept.
- Practice to assess your knowledge.

With this method, you should reap the rewards of your hard work and complete the course successfully.

Your registration includes access to online course components, which are designed to reinforce the textbook content and help you assess your knowledge.

Before you read a chapter, we recommend that you log in to the online course and use the online chapters along with your text. We suggest the following approach:

- Read the *overview* section and the *learning objectives* for each chapter.

- Read the chapter in your textbook or the online PDF. Use this first reading to familiarize yourself with the material. Take notes where necessary, especially if there is a concept you don’t understand.
- Complete the online *learning activities* for each chapter.
- If you have any questions related to the course material, review the online *FAQs* section. You may find the answers there.
- Read the chapter slowly a second time. Pay particular attention to those areas you found challenging during your first reading.
- Pay attention to the tables, charts, and figures. These will help you with the practical aspects of the material.
- Work through *all* examples and calculations, making sure you understand how we arrived at the correct answers.
- Complete the *review questions* for each chapter.
- Read the *chapter summary* to reinforce your learning.

Don’t forget to review the *key term* definitions in the *glossary* at the end of the textbook. Familiarity with the terminology and jargon used in the industry will help you fully understand the learning material.

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SECTION 1

THE CANADIAN INVESTMENT MARKETPLACE

The Canadian Securities Industry

The Capital Market

The Canadian Regulatory Environment

The Canadian Securities Industry

Chapter Overview

In this chapter, we describe the interrelationships between the various participants in the Canadian securities industry. In particular, we discuss the important role that investment dealers and other financial intermediaries play in channelling funds between lenders and borrowers.

learning objectives	**content areas**
1 | Describe the relationships between t major participants in the Canadian securities industry	**Overview of the Canadian Securities Industry**
2 | Distinguish between three categories of investment dealers including how they are organized	**The Investment Dealer's Role as a Financial Intermediary**
3 | Explain the difference between principal and agency transactions	
4 | Distinguish between roles of the various fina institutions	**Financial Intermediaries Other than Investment Dealers**
5 | Discuss the trends affecting the financial services industry in Canada and globally.	**Financial Market Trends**

Key Terms

Key terms are defined in the Glossary and appear in **bold** text in the chapter.

agent

broker

capital markets

CDS Clearing and Depository Services Inc.

clearing

closed-end fund

consumer finance company

discount broker

financial intermediary

fintech

firewall

institutional firm

integrated firm

investment dealer

investment fund

Investment Industry Association of Canada

mutual fund

open-end fund

pension fund

primary market distribution

principal

retail firm

robo-advisor

sales finance company

savings bank

schedule I bank

schedule II bank

schedule III bank

self-directed broker

settlement

Introduction

Consider the following scenarios:

- A couple needs to borrow money to buy a home.
- An entrepreneur needs to raise funds to develop a new product.
- A mother wants to set up a regular program to save for her children's education.

Both the couple and the entrepreneur, as borrowers, are *users of capital*, whereas the mother, as an investor, is a *supplier of capital*. What they all have in common is the need for a financial intermediary to help them meet their goals.

A financial intermediary is an institution such as a bank that borrows money from suppliers of capital and lends it to users of capital. In other words, investors lend funds to the intermediary, and the intermediary, in turn, lends those funds to borrowers in the form of loans, mortgages, and other products. An intermediary can also play a more direct role. The intermediary can raise capital by bringing a new issue of securities to the financial markets.

For example, a company wishing to expand its business might generate the necessary investment capital by issuing securities to the public in the form of stocks. An investment dealer helps the company issue the stocks and sell them to investors. The investors who buy the stocks transfer their money to the company through the intermediary. In return, they receive the stocks, which represent a share of ownership of the company.

The company can use the proceeds from the stock transaction and reinvest them in the firm, which spurs further economic development. In addition, the intermediary earns a profit on the transaction. If the firm does well following the expansion, and the price of its stock rises in value, investors will be able to sell them in the marketplace to earn a profit.

By these means, financial intermediaries help to establish efficient methods of channelling funds between lenders and borrowers.

Dive Deeper

To fully understand the concepts presented in this textbook, you should stay informed about the financial markets and the industry in general. The lessons will be easier to grasp if you relate them to the activities that unfold each day in the financial markets. Countless sources of information about the financial markets are readily available online, as well as in newspapers, books, and magazines. Ultimately, by staying informed, you will more easily reach your goal of becoming a competent and trusted participant in the securities industry.

Overview of the Canadian Securities Industry

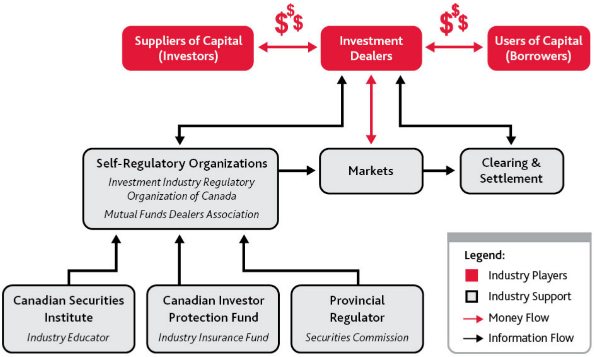
1 | Describe the relationships between the major participants in the Canadian securities industry.

Canada has one of the most sophisticated and efficient **capital markets** in the world. Market activity is measured by the variety and size of new issues that are brought to the market, as well as the depth and liquidity of trading of those issues. Canada's securities industry is highly competitive, and it is becoming more competitive each year. Market participants must have extensive, specialized, and up-to-date knowledge about securities issuers and investors in a securities market that is constantly changing. An entrepreneurial spirit of innovation and calculated risk-taking are among its hallmarks. Change and volatility are frequently the norm.

The Canadian securities industry is mainly regulated by the provinces. They have the power to create and enforce their own laws and regulations through securities commissions (called securities administrators in some provinces). Securities commissions delegate some of their powers to self-regulatory organizations (SRO) such as the Investment Industry Regulatory Organization of Canada (IIROC). The SROs establish and enforce industry regulations that protect investors and maintain fair, equitable, and ethical practices. In that capacity, SROs are responsible for setting the rules that govern many aspects of investment dealers' operations, including sales, finance, and trading.

The major participants in the industry and their interrelationships are illustrated in Figure 1.1.

Figure 1.1 | Structure of the Canadian Securities Industry


Suppliers of Capital (Investors)
Investment Dealers
Users of Capital (Borrowers)
Self-Regulatory Organizations
Investment Industry Regulatory Organization of Canada
Mutual Funds Dealers Association
Markets
Clearing & Settlement
Canadian Securities Institute
Industry Educator
Canadian Investor Protection Fund
Industry Insurance Fund
Provincial Regulator
Securities Commission
Legend:
Industry Players
Industry Support
Money Flow
Information Flow

The various participants interact with each other as follows:

- Suppliers and users of capital trade financial instruments through financial markets such as stock exchanges and money markets.
- **Investment dealers** (also called **brokers**) act as intermediaries by matching investors with the users of capital. Each side of a transaction has its own dealer who matches the trades through the markets.
- Trades and other transactions are cleared and settled through organizations such as CDS Clearing and Depository Services Inc. and banks. **Clearing** is the process of confirming and matching security trade details; **settlement** is the irrevocable moment when cash and securities are exchanged.
- The SROs set and enforce rules that govern market activity and monitor the markets to ensure fairness and transparency.
- The Canadian Investor Protection Fund and similar organizations provide insurance against dealer insolvency.
- Provincial regulators oversee the markets and the SROs.
- The Canadian Securities Institute and similar organizations provide education for industry participants.

Did You Know?

Industry Statistics

According to recent statistics from the **Investment Industry Association of Canada** (IIAC), there are 165 IIROC firms in the securities industry. Together, these firms employ more than 46,000 people. For more information, please visit the Industry Data available on the IIAC website at www.iiac.ca.

The Canadian Securities Industry OVERVIEW

How well do you know the structure of the Canadian securities industry and the interrelationships between its major participants? *Complete the online learning activity to assess your knowledge.*

Note: To access the online components of your course, log in to your Student Profile at www.csi.ca and, once logged in, click on the 'Access Online Courses' button.

The Investment Dealer's Role as a Financial Intermediary

2 | Distinguish among the three categories of investment dealers including how they are organized.

3 | Explain the difference between principal and agency transactions.

The term **financial intermediary** describes any organization that facilitates the trading or movement of financial instruments that transfer capital between suppliers and users of capital. Intermediaries are a key component of the financial system. They include investment dealers, banks, credit unions, trust companies, and insurance companies. Let's look at the role of the investment dealer as a financial intermediary.

Investment dealers act on their clients' behalf as **agents** in the transfer of financial instruments between different investors. They sometimes also act as **principals**, rather than agents. In both cases, they play a significant role in the securities industry's two main functions:

1. They help to transfer capital from suppliers to users through the underwriting and distribution of new securities. This activity takes place in the primary market in the form of a **primary market distribution** (or primary offering). When a private company goes public and issues stocks in the primary market for the very first time, the sale is known as an initial public offering.

2. They maintain secondary markets in which previously issued or outstanding securities can be traded. For example, buying and selling stocks through the Toronto Stock Exchange.

Types of Investment Dealers

The following three categories of investment dealers make up the Canadian securities industry:

- **Retail firms** include full-service investment dealers and **self-directed brokers** (also known as **discount brokers**). Full-service retail firms offer a wide variety of products and services for the retail investor. They also provide various levels of advice, depending on the financial and wealth management concerns of their investor clients. Self-directed brokers, on the other hand, are considered the do-it-yourself approach to investing. They execute trades for clients at reduced rates, but they do not provide investment advice.

- **Institutional firms** are investment dealers that serve exclusively institutional clients, organizations that trade large volumes of securities. Institutional clients include **pension funds** and mutual funds and may be domestic or foreign institutional firms. In Canada, foreign firms account for about one-third of all institutional clients. Foreign firms include affiliates of many of the major U.S. and European securities dealers.

- **Integrated firms** offer products and services across the industry and participate fully in both the retail and institutional markets. Most integrated firms underwrite all types of federal, provincial, and municipal debt, as well as corporate debt and equity issues. They are active in secondary markets, including the money market, as well as on all Canadian stock exchanges and some foreign exchanges.

Many smaller retail or institutional investment dealers, known as *investment boutiques*, specialize in particular market segments. For example, an investment boutique might specialize in stock trading, bond trading, or trading strictly in unlisted stocks.

Organization within Firms

The operational structure of investment dealers varies widely in the industry. A typical configuration divides the firm into different departments, with each department focusing on a specific task. A larger, integrated firm, for example, might be organized into front, middle, and back offices, with senior management overseeing all departments. The roles of the various departments are described below.

Senior MANAGEMENT

Senior management usually includes a chairperson, a president, an executive vice-president, directors, and departmental vice-presidents, some of whom are also directors. Some firms may have directors from outside the securities industry. Most senior officers work at head office, but some may be in charge of regional branch offices in Canada or abroad.

Front, Middle, and Back Offices

The three-level organizational structure of most investment dealers allows them to manage client portfolios effectively and process trades efficiently, in compliance with regulatory requirements. The functions and duties of each department are described in Table 1.1.

Table 1.1 | Departmental Functions at an Investment Dealer

Role	**Functions**
Front Office	Performs staff functions pertaining directly to portfolio management activities • Portfolio management • Trading • Sales • Marketing
Middle Office	Performs functions critical to the efficient operation of the firm • Compliance • Accounting • Audits • Legal
Back Office	Settles the firm's security transactions • Settlements

The success of an investment dealer rests largely on profits generated by its sales department, which is usually the largest unit in the firm's front office. In an integrated firm, the sales department is typically separated into institutional and retail sales.

The retail sales force serves individual investors and smaller business accounts. It usually comprises the largest single group of a firm's employees. Retail investment advisors normally perform a wide range of activities to meet the complete spectrum of the investors' types and needs.

The Principal and Agency Functions of an Investment Dealer

Investment dealers facilitate the trading of securities and the transfer of capital between suppliers and users. They sometimes act as principals; at other times, they act as agents for their clients.

PRINCIPAL TRANSACTIONS

When they act as principals, investment dealers may own the securities as part of their inventory, at some stage of the buying and selling transaction with investors. The difference between the buying price and the selling price of the securities is their gross profit or loss.

Another principal transaction is underwriting. In the securities business, underwriting refers to purchasing from a government body or a company a new issue of securities, on a given date at a specified price. When investment dealers act as principals by underwriting, they use their own capital to buy an issue to then sell it at a profit in the primary market.

After a primary distribution is completed, investment dealers also act as principals in secondary markets by maintaining an inventory of already issued, outstanding securities. In these transactions, the dealers buy securities in the open market, hold them in inventory for varying periods of time, and subsequently sell them.

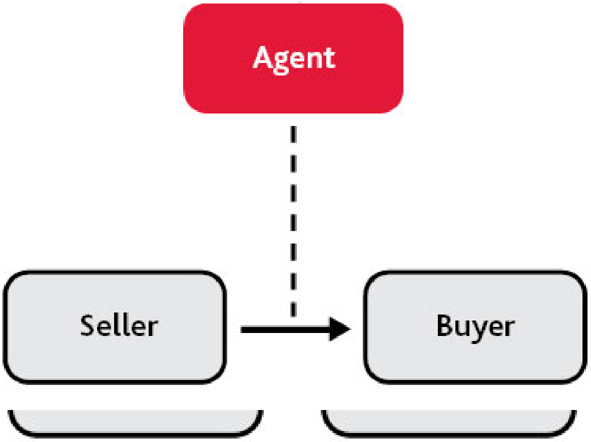
Agency Transactions

When investment dealers act as agents on behalf of buyers or sellers, they do not own title to the securities that they deal with, at any time during the transactions. Their profit is the agent's commission they charge for each transaction.

In these transactions, the principals are the clients who buy and sell securities, and who own the securities. The agent acting for the seller and the agent acting for the buyer both respectively charge their clients a commission for executing the trade.

The principal and agent roles in securities transactions are illustrated in Figure 1.2.

Figure 1.2 | Principal Versus Agent Transactions



Did You Know?

An agent acting on behalf of a client is often called a broker, and the broker's role is generally thought of as that of an agent. However, the term *broker* is commonly used to describe an investment dealer acting in any capacity.

Generally, for most secondary trading of debt securities, the investment dealer acts as principal, although occasionally some agency trades take place. With new money market issues, for example, a dealer may either sell the securities as an agent or take them into inventory as principal for a later resale.

Services Provided by Investment Dealers

By participating in the secondary market and maintaining an inventory of outstanding securities, investment dealers provide several useful services:

- They provide informed advice about the terms and features for new issues in the primary market, based on their knowledge of current conditions in the secondary markets.
- They add liquidity to the market with relative ease by making transactions from their inventory, rather than waiting for simultaneous matching buy-sell orders from other investors.
- They sometimes act as market makers and carry out market-making duties by taking positions in assigned listed stocks to enhance market liquidity and smooth out undue price distortions.
- They sometimes buy listed stocks as principals, thus accumulating large blocks of shares, becoming more competitive in serving their larger institutional clients.
- The liquidity they add to the secondary market enhances the primary market by assuring that buyers of new securities will be able to sell their holdings at reasonable prices.

Investment dealers also trade from their own accounts to make a profit.

The Clearing System

During a trading day, exchange members act as both buyers and sellers of many listed stocks. Rather than each member making a separate settlement with another member on each trade during the course of a trading day, a designated central clearing system handles the daily settlement process between members.

In Canada, securities are cleared through **CDS Clearing and Depository Services Inc**. Although CDS is not considered a financial intermediary, it is a valued partner to dealers that operate in the securities market, providing reliable clearing services. CDS operates CDSX, the facility for the clearing and settlement of trades in equity and debt securities in Canada and for various cross-border transactions. Marketplaces such as the Toronto Stock Exchange (TSX), the TSX Venture Exchange, and alternative trading systems report trades to CDSX. Over-the-counter trades are also reported to CDS by participants in the system. Participants with access to the clearing and settlement system primarily include banks, investment dealers, and trust companies.

The central clearing system uses a process called *netting* to establish and confirm a credit or debit position balance, in the form of cash or security, for each dealer member. The netting process compiles each firm's clearing settlement sheets and informs each member of the securities or funds it must deliver to balance its account. In this way, the number of securities and the amount of cash that must change hands among the various members each day is substantially reduced.

THE KEY ROLES OF AN INVESTMENT DEALER

What is the difference between an investment dealer's role as a principal and its role as an agent? *Complete the online learning activity to assess your knowledge.*

Financial Intermediaries Other than Investment Dealers

4 | Distinguish between the roles of the various financial institutions.

So far, you have learned about the role that investment dealers play as financial intermediaries. We now discuss other financial intermediaries, including chartered banks, credit unions and caisses populaires, trust companies, insurance companies, and other types of firms that play an intermediary role in the Canadian financial services industry.

Chartered Banks

In Canada, the primary function of the chartered banks is to accept and safeguard deposits from individuals and businesses, mainly in the form of deposits, and to then lend or transfer those funds to users, in the form of mortgages, car loans, business loans, and other lending instruments.

All chartered banks in Canada operate under the *Bank Act* and must function within its regulatory framework. The *Bank Act* is the federal legislation that sets out operating rules and restrictions for banks and is updated regularly, usually through five-year revision cycles.

Under the *Bank Act*, banks are designated as Schedule I, Schedule II, or Schedule III. Each designation has unique rules and regulations surrounding the banks' activities. Most Canadian-owned banks are designated as Schedule I banks, whereas foreign-owned banks are either Schedule II or Schedule III banks.

Schedule I Chartered Banks

Schedule I banks are banks that are not a subsidiary of a foreign bank and are considered *domestic* banks even if they have foreign shareholders. There are currently more than 30 domestic Schedule I banks in operation in Canada. Six Canadian banks stand out, in terms of asset size, above all other Canadian-owned banks, as well as most other non-bank financial institutions.

Did You Know?

Canada's Big Six Banks:

- Bank of Montreal (BMO)
- Canadian Imperial Bank of Commerce (CIBC)
- National Bank of Canada
- Royal Bank of Canada (RBC)
- Scotiabank
- Toronto-Dominion Bank (TD Bank Group)

The six major banks have achieved their dominant asset sizes by establishing a network of thousands of retail branches and automated teller machines throughout Canada. These outlets attract and centralize most of the savings of Canadians. Schedule I banks have also expanded their international operations by acquiring or investing in foreign international financial institutions.

Currently, voting shares of large Schedule I banks must be widely held, with the control of any single shareholder or group of shareholders restricted to no more than 20%. In contrast, a single shareholder (individual or company) can own up to 65% of the voting shares of a medium-sized bank, which has shareholder equity of $2 billion or more but less than $12 billion. However, the remaining 35% of the voting shares must be publicly traded. A small bank, which has shareholder equity of less than $2 billion, can be fully owned by one person or organization.

Canadian banks offer a wide variety of consumer and commercial banking products and services, including mortgages, loans, accounts, and investments. Savings deposits are eligible for deposit insurance, which is provided by the Canada Deposit Insurance Corporation (CDIC). Banks also offer financial planning, cash management, and wealth management services—some directly and some through subsidiaries.

Within the banking groups, subsidiaries also handle services such as investment dealer activities, self-directed investing, and the sale of insurance products. Current legislation allows banks to take part in diverse sectors of the financial services industry. However, the *Bank Act* sets controls on these activities, particularly with regard to the sharing of customer information. The barriers that inhibit information sharing across a bank's various business units are commonly known as **firewalls**.

EXAMPLE

A bank offers chequing accounts and mortgages through its local branch. A customer visits the branch to ask about opening a self-directed investment account. The customer is then directed to the bank's investment dealer subsidiary and receives all further related correspondence from that subsidiary. However, the bank branch has no access to any information about the customer's brokerage account or trades. Likewise, the investment dealer subsidiary has no access to the customer's bank account or loan balances. In this way, the operations of different businesses within the same banking group are kept separate.

One major source of income for banks is the activity of lending funds to individuals or companies at an interest rate that is higher than the interest rate that the banks pay out on deposits and other borrowings. The spread between the two sets of interest rates covers the banks' operating costs, including rent, salaries, administration, and appropriations for loan losses. The spread also provides a margin of profit for the bank.

Schedule II and Schedule III Banks

Schedule II banks are incorporated and operate in Canada as federally-regulated foreign bank subsidiaries. The deposits that these banks accept may be eligible for deposit insurance provided by the CDIC. The banks may also engage in all types of business permitted to a Schedule I bank.

Schedule II banks derive most of their revenue from retail banking and electronic financial services. Examples of Schedule II banks in Canada include the AMEX Bank of Canada, Citibank Canada, and UBS Bank (Canada).

Schedule III banks are federally-regulated foreign bank branches of foreign institutions that have been authorized under the *Bank Act* to do banking business in Canada. Schedule III banks tend to focus on corporate and institutional finance and investment banking. Examples of Schedule III banks in Canada include Barclays Bank, Comerica Bank, and The Bank of New York Mellon.

The government allows foreign banks to operate in Canada, which in turn helps Canadian-owned Schedule I banks conduct operations abroad. Foreign-owned banks in Canada also provide a conduit for investment of foreign capital in Canada, while also providing an alternative source of borrowed funds for Canadian corporate borrowers.

Credit Unions and Caisses Populaires

Credit unions and caisses populaires offer businesses and consumers a wide variety of banking services. They provide deposit-taking services, lending, mortgages, mutual funds, insurance, investment dealer services, and debit and credit cards. Credit unions often cater to member-savers from common interest groups, such as individuals who live in the same neighbourhood, share similar ethnic backgrounds, or belong to the same business or social group.

The federal legislation governing credit unions is the *Cooperative Credit Associations Act* (CCAA). This act generally limits the activities of credit unions. They can provide financial services to their members, entities in which they have a substantial investment, and certain types of cooperative institutions. They can also provide administrative, educational, and other services to cooperative credit societies.

The CCAA requires associations to adhere to investment rules based on a “prudent portfolio approach”. It prohibits associations from acquiring substantial investments in entities, other than a list of authorized financial and quasi-financial entities. It also sets out a number of limits designed to restrict the exposure of associations to real property and equity securities.

Trust and Loan Companies

Federally and provincially incorporated trust companies are the only corporations in Canada authorized to engage in a trust business. Trust companies act as a trustee in charge of corporate and individual assets such as property, stocks, and bonds. They also offer a broad range of financial services that overlap services provided by the chartered banks. For example, trust companies accept savings, issue term deposits, make personal and mortgage loans, and sell registered retirement savings plans and other tax-deferred plans. In addition, they provide estate planning and asset management.

Insurance Companies

The insurance industry has two main lines of business. The first line of business is life insurance, while the second line of business is known as property and casualty insurance.

Life insurance includes the following related products:

- Health and disability insurance
- Term and whole life insurance
- Pension plans
- Registered retirement savings plans

- Annuities

Because life insurance companies act as trustees for the funds entrusted to them by policyholders, they must exercise extreme caution in selecting their investments so that they can be sure to meet future contractual obligations.

Property and casualty insurance encompasses protection against loss of the following items:

- Home
- Auto
- Commercial business

According to the Insurance Bureau of Canada, the largest aggregate premiums in the property and casualty line of business are generated by automobile insurance, followed by property insurance and liability insurance.

Underwriting is the most important aspect of the insurance business in Canada. Insurance underwriting is the business of evaluating the risk and associated contractual responsibility that the insurance company is willing to accept in exchange for its clients' insurance premiums.

The other significant aspect of the insurance business is reinsurance. Reinsurance refers to the practice of exchanging risk between insurance companies to facilitate better risk management.

Did You Know?

The key federal legislation governing insurance companies is the *Insurance Companies Act*. This legislation grants companies enhanced powers to make consumer and corporate loans, but it also contains restrictions on activities such as in-house trust services and deposit-taking. Furthermore, it allows only life insurance companies to offer annuities and segregated funds.

Some Canadian Schedule I banks fully own insurance companies. However, although these large domestic banks have established their own insurance subsidiaries, the *Bank Act* forbids them from selling insurance through their branch networks, with the exception of insurance related to loans and mortgages.

Other Financial Intermediaries

Several other financial intermediaries play an important role in the Canadian financial services industry. These businesses are categorized below according to the types of products and services they offer:

- **Investment funds** are companies or trusts that sell shares or units to the public and invest the proceeds in a diverse securities portfolio. **Closed-end funds** typically issue shares only at start-up or at other infrequent periods, whereas **open-end funds** (commonly called **mutual funds**) continually issue shares to investors and redeem these shares on demand. Of the two types of funds, open-end funds are by far the larger, accounting for approximately 95% of aggregate funds invested.
- ATB Financial (originally established as the Alberta Treasury Branches), known as **savings banks**, was formed in 1938 when chartered banks pulled out their branches from many smaller towns. The ATB became a provincial crown corporation in 1997 and was renamed ATB Financial in 2002. These banks provide a full range of financial services to Albertans.

- **Consumer finance companies** make direct cash loans to consumers, who are usually unable to secure a loan from a bank. Consumer finance companies typically charge higher rates of interest than banks.
- **Sales finance companies** purchase instalment sales contracts from retailers and dealers at a discount, when items such as new cars, appliances, or home improvements are bought on instalment plans by consumers.
- Pension plans have accounted for remarkable growth in the institutionalization of savings during the past 60 years.

Other FINANCIAL Intermediaries

Apart from investment dealers, who are the intermediaries, and what role do they play in the capital markets? *Complete the online learning activity to assess your knowledge*.

Financial Market Trends

5 | Discuss the trends affecting the financial services industry in Canada and globally.

Various recent trends have made an impact in Canada and around the world. Some of the more important trends are described below.

Financial Technology

Financial technology companies, known collectively as the **fintech** industry, take advantage of computer technology to support or enable a variety of banking and financial products and services, including online loans, electronic wallets, and automated financial planning software. The fintech industry is challenging the role of traditional financial services institutions in Canada and around the world.

Robo-advisors

In recent years, a new online investment service has emerged that provides clients with advice, in contrast to the execution-only model of self-directed brokerage. Popularly known as **robo-advisors**, these firms began to appear in the United States after the 2008 financial crisis but did not gain traction until 2012. By 2019, they had amassed more than US$700 billion in assets under management. In Canada, online investment advice platforms began to proliferate in 2014, with multiple service providers registered in several provinces by mid-2016. Robo-advisors in Canada currently hold well over $10 billion CAD in assets under management.

Many variations of robo-advisor services exist in the United States and Canada, but most share several of the following attributes:

- They provide clients with goal-based online investment management.
- Portfolios are created using algorithms based on modern portfolio theory and online client questionnaires.
- A telephone call with an advisor verifies that the computer-generated portfolio is suitable for the client.
- Advisor support is offered to varying degrees, typically online or by phone.

- Portfolios are built primarily with exchange-traded funds.
- Portfolios are regularly rebalanced.
- Financial planning may be offered in varying degrees.
- Service may be provided to the end client as well as to intermediaries such as advisors and employers.
- Competitive positioning is based on the client experience, which typically encompasses the following services:
    - Ease of online navigation
    - Speed of account opening and transfers
    - Integration of service delivery across devices
    - Transparency of performance and fees
- Portfolio management is optimized with tools such as tax-efficient rebalancing across account types.

SOCIAL AND ECONOMIC SHIFTS

Lifestyle and social trends continuously affect the financial industry, especially trends related to the following key factors:

- Demographics
- Defined benefit and defined contribution pension plans
- Savings rates
- Debt levels

Demographics

Demographic shifts are reshaping Canada's economy and will continue to do so. Baby boomers comprise roughly 9.5 million Canadians born between 1946 and 1965. There are also about 4.5 million Canadians who are older than baby boomers, most of whom are now in their retirement years.

Much has been written on the aging population and its effect on virtually all aspects of life, including education, product delivery, and health care. Ultimately, as the Canadian population ages, we are becoming a society heavily influenced by the needs and attitudes of consumers over age 50.

An important trend to monitor is the growth of the segment of Canadians over age 65. As the leading edge of the baby boomer population reaches this milestone retirement age, advisors are expected to adjust their service offering to reflect the needs of their client base, which is increasingly made up of retired Canadians.

At the other end of the spectrum, millennials (those born in the 1980s and the first half of the 1990s) represent 27% of the total population, making it the largest generation of Canadians. There are significant economic differences between millennials and baby boomers. According to Statistics Canada, millennials have higher mortgage debt, higher student loan debt, and a lower net worth than baby boomers at that age. Millennials, though, still have the time and resources to catch up by employing sound savings and investment strategies.

Defined Benefit and Defined Contribution Pension Plans

A defined benefit (DB) pension plan provides employees with a pre-determined specified payment amount of funds when they retire, whereas a defined contribution (DC) pension plan allows employees and employers to contribute to a plan that invests funds over time to save for retirement, but the final benefit amount at retirement will depend on how the contributions are invested over the plan's life.

A DB pension plan's risks, such as longevity, market volatility, and low interest rates, are borne entirely by the employer because they have to cover a pension shortfall, which is classified as a liability on financial statements. As a result, employers are gradually shifting to DC pension plans to pass on the risks to the employees. Hybrid pension plans—a combination of DB and DC plans—are also gaining traction in Canada.

Savings Rates

Generally, Canadians have several common sources of retirement income:

- Employer pension plan
- Canada Pension Plan, Quebec Pension Plan, and Old Age Security
- Income from personal savings, such as registered retirement savings plans, tax-free savings accounts, and non-registered accounts
- The liquidation of fixed assets or downsizing of a principal residence
- The sale of a business or the creation of a succession plan where the business passes on to family members but still pays the original owner an income

A common notion is that Canadians will need 70% of their income at retirement. This figure is a rule of thumb. Some clients might need less; others might need more, depending on their expected retirement lifestyle. It is recommended that individuals save 10% to 20% of their pre-tax income during their working years. However, recent studies indicate that the level of Canadian savings has fallen below 2%.

Household Debt Levels

Household debt is defined by Statistics Canada as mortgage debt on principal residences, vacation homes, and other real estate as well as consumer debt. Consumer debt refers to outstanding debt on credit cards, personal and home equity lines of credit, secured and unsecured loans from financial institutions, and unpaid bills such as rent and taxes. Debt levels continue to be an area of concern in Canada. While debt-to-income levels have remained steady in the past three years at approximately 172% of disposable income, the level of debt-to-income was closer to 100% of disposable income in 2000. An individual's inability to service debt can increase stress levels. Concerns arise when interest rates are poised to increase because the cost of servicing debt and bankruptcies tends to rise.

CRYPTOCURRENCY

Cryptoassets have been gaining in popularity around the world. Cryptoassets are assets that exist only in digital form and use cryptography to prevent counterfeiting and fraudulent transactions. They rely on peer-to-peer networking and a public ledger to regulate the creation and transfer of assets without the use of an intermediary. One of the more popular examples of a cryptoasset is bitcoin.

Bitcoin

Bitcoin is the asset that gave birth to the adoption of many other cryptocurrencies. It was created largely as an alternative payment system that would operate outside of central banking control. It was launched in 2008 when confidence in financial markets was very low, and its continued (albeit volatile) rising long-term price trend has been supported by continued debasement of fiat currencies.

Bitcoin is based on the decentralized, open-source protocol of the peer-to-peer Bitcoin computer network. The network creates a decentralized public transaction ledger, called the blockchain, on which all Bitcoin transactions are recorded. Movement of bitcoin is facilitated by a digital, transparent, and immutable ledger that enables the rapid transfer of value across the internet, without the need for centralized intermediaries.

The Bitcoin concept can be separated into two components:

Bitcoin the token Bitcoin the token is a piece of code that represents ownership of a digital concept (a bitcoin) with financial value. Investors may invest in and own the bitcoin, either directly or indirectly, through an investment vehicle.

Bitcoin the protocol Bitcoin the protocol is the distributed network, or blockchain, that maintains the ledger of balances of bitcoin the token.

Both concepts are referred to as “bitcoin”, although, typically, Bitcoin with a capital B represents the protocol layer (the Bitcoin blockchain), and bitcoin with a small b refers to the bitcoin as financial value. Each bitcoin is a computer file stored in a digital wallet on a computer or smartphone. The bitcoin trading symbol is BTC or, less commonly, XBT.

Typically, bitcoin investors’ interest lies only in what they own, no different from their interest in ownership of a share in a company. As a medium of exchange, store of value, and investment, bitcoin’s growth in popularity has gone through different stages, starting with its early adoption by cyber-punks and gamers through to the more recent phase of institutional acceptance. Today there are numerous ways by which retail investors, wealth managers, institutional investors, and treasuries can invest in bitcoin, including through crypto-exchanges and investment products such as a closed-end mutual fund or ETF.

The infrastructure behind bitcoin and the method by which transactions are processed and validated (the blockchain) should also be of interest because it is this infrastructure that is critical to the integrity of a bitcoin purchase.

To understand how bitcoin works, it helps to understand the two terms: *blockchain* and *private and public keys*.

Blockchain Bitcoin is powered by open-source code, known as the blockchain, which creates a shared public ledger. The ledger is available to record and validate the transactions that have taken place in the past, which cannot be altered. Each transaction is a “block” that is “chained” to the code, creating a permanent record of the transaction.
Blockchain technology is at the heart of more than 4,000 cryptocurrencies that have followed in Bitcoin’s wake.

Private and public keys A bitcoin wallet contains a public key and a private key, which work together to allow the owner to initiate and digitally sign transactions. The private key is essentially the bitcoin owner’s secret password. Both keys provide proof of authorization and, ultimately, the authorization to proceed with transactions (which are also irreversible).

Bitcoin was programmed to maintain its value as a deflationary currency by limiting the number of total bitcoins in existence. The Bitcoin network software has pre-programmed the creation of new coins through the mining reward process and a well-thought-out economic model that decreases the availability of new coins. Availability will end when the 21 million bitcoin limit has been reached. Currently, there are around 18.5 million bitcoins in circulation.

Bitcoin's limited supply and various demand factors mentioned earlier (medium of exchange, store of value, and investment), have resulted in tremendous price appreciation and market capitalization. As of April 2021, the total value of all bitcoins in circulation was around US$1 trillion.

CASE SCENARIO

Can you help your friend Marty by answering his questions about investment dealers? *Complete the online learning activity to assess your knowledge.*

KEY TERMS & DEFINITIONS

Can you read some definitions and identify the key terms from this chapter that match? *Complete the online learning activity to assess your knowledge.*

Summary

In this chapter, we discussed the following key aspects of the Canadian Securities Industry:

- Canadian capital markets are among the most sophisticated and efficient in the world, as indicated by the variety and size of new issues brought to the markets and the depth and liquidity of secondary market trading.
- The three categories of investment dealer firms are integrated, institutional, and retail. Integrated firms offer products and services that cover all aspects of the industry. Institutional firms primarily handle the trading activity of large clients such as pension funds and mutual funds. At the retail level, full-service firms offer a wide variety of products and services, and self-directed brokers offer reduced trading rates but do not provide advice.
- One main role of investment dealers is to bring new issues of securities to the primary markets. They also facilitate trading in the secondary markets. These firms can act as principals or agents in either market.
- The Canadian chartered banks are the largest financial intermediaries in the country. They are designated as Schedule I, Schedule II, or Schedule III banks. Each designation has different rules and regulations regarding ownership levels and the types of services they are allowed to offer.
- Financial intermediaries offer a broad range of financial services that, in many cases, overlap with the services provided by chartered banks. Services include deposit-taking and lending, debit and credit cards, mortgages, and mutual funds.
- Investment funds sell their shares to the public, most often in the form of closed-end or open-end funds, and invest the proceeds in diverse portfolios of securities. Loan companies make direct cash loans to consumers, who typically repay principal and interest in instalments. Pension plans represent a type of institutionalized savings. These plans are offered to the employees of many companies, institutions, and other organizations.

- In contrast to the execution-only model of self-directed brokerage, a new online investment service that provides investors with advice, popularly known as robo-advisors, has emerged in Canada. Robo-advisors offer goal-based online investment management, portfolios created using algorithms based on modern portfolio theory, and advisor support among other services.
- Bitcoin is slowly making its way into the traditional investing world. Its value is derived from both its use as a medium of exchange and as a store of value. Bitcoin investment or trading vehicles include trusts, mutual funds, hedge funds, futures, and options.

Review Questions

Now that you have completed this chapter, you should be ready to answer the Chapter 1 Review Questions.

Frequently Asked Questions

If you have any questions about this chapter, you may find answers in the online Chapter 1 FAQs.

The Capital Market

Chapter Overview

In this chapter, you will learn about investment capital, including what it is, why we need it, where it comes from, and who uses it. You will also learn about the different types of financial instruments that are traded in the financial markets. In discussing the financial markets themselves, we explain the difference between primary and secondary markets and between auction and dealer markets. Finally, you will learn about the electronic trading systems that are used in both equity and fixed-income markets.

learning objectives	**content areas**
1 | Describe the role of investment capital in the economy, including its supply and use	**Investment Capital**
2 | Differentiate betwee types of financial instruments used in capital transactions	**The Financial Instruments**
3 | Describe the distinguishing features and operation of the various types of financial markets.	**The Financial Markets**

Key Terms

Key terms are defined in the Glossary and appear in **bold** text in the chapter.

alternative trading system

ask price

auction market

bid-ask spread

bid price

Bourse de Montréal

Canadian Securities Exchange

Canadian Unlisted Board Inc.

CanDeal

CanPX

capital

CBID

CBID Institutional

common share

dealer market

equity securities

ICE NGX Canada

institutional investor

investment advisor

last price

liquidity

MarketAxess

market maker

money market

Montréal Exchange

NEO Exchange

over-the-counter market

preferred share

primary market

retail investor

secondary market

stock exchange

stocks

Toronto Stock Exchange

TSX Alpha Exchange

TSX Venture Exchange

unlisted market

Introduction

The securities industry plays a significant role in sustaining and expanding the Canadian economy. The industry is growing and evolving to meet the ever-changing needs of Canadian investors, from both domestic and international perspectives. The vital economic function the securities industry plays is based on a simple process: the transfer of money from those who have it (suppliers of capital) to those who need it (users of capital).

Three elements are of central importance to the securities industry: financial intermediaries, financial markets, and financial instruments. In the previous chapter, we focused on the intermediaries that have evolved to enable the transfer of capital, such as investment dealers, banks, and trust companies.

In this chapter, we discuss the characteristics of capital, and we look at the markets within which suppliers and users of capital transfer it through the intermediaries. We also provide a brief introduction to some of the financial instruments that make capital transfer possible.

Investment Capital

1 | Describe the role of investment capital in the economy, including its supply and use.

Capital is synonymous with wealth, both real (i.e., land, buildings, and other material goods) and representational (i.e., money, stocks, and bonds). All of these items have economic value that represents the invested savings of individuals, corporations, governments, and other organizations.

Representational capital becomes more significant when it is harnessed productively, through either direct or indirect investment. Table 2.1 shows examples of each investment type.

Table 2.1 | Direct and Indirect Investing

Direct Investment	**Indirect Investment**
• A couple invests their savings in a home. • A government invests in highways. • A company sets up a new plant.	• An investor buys stocks or bonds. • A parent invests in an education savings plan. • A couple deposits their savings at a bank.

The indirect investment process, where investors purchase representational items such as stocks or bonds, is the principal focus of this course.

Indirect investment occurs when a person or entity with accumulated savings buys the securities issued by a government or corporation, which in turn invests the funds it receives directly for a productive purpose. Indirect investment is normally made with the help of an **investment advisor** in the retail or institutional sales department of a securities firm.

Characteristics of Capital

Capital has three important characteristics: *mobility, sensitivity to its environment*, and *scarcity*. These characteristics allow capital to be selective about where it settles, which is usually countries or locations where favourable conditions exist. Favourable conditions include stable government, economic activity that is not heavily regulated, a hospitable investment climate, and profitable investment opportunities. The flow of capital is therefore guided by country risk evaluation.

In evaluating the various components of country risk, you should consider the following factors:

The political environment	Is the country involved, or likely to be involved, in internal or external conflict?
Economic trends	How strong is growth in key areas such as gross domestic product, inflation rate, and economic activity?
Fiscal policy	How high are taxes and government spending, and to what degree does the government encourage savings and investment?
Monetary policy	How sound is the nation's money supply management, and to what extent does it promote price and foreign exchange stability?
Investment opportunities	What opportunities exist for investment, and how satisfactory are the returns on investment in comparison to the risk?
The labour force	What percentage of the labour force is skilled and productive?

Because capital is limited in quantity and considered scarce, it is in great demand everywhere in the world. And because it is mobile and sensitive, it moves in or out of countries or localities in anticipation of changes to taxation, exchange rates, trade barriers, regulations, and government attitudes. It tends to move to areas where it can be best used and where it can avoid less favourable conditions. In other words, capital always moves towards uses and users that offer the highest risk-adjusted returns.

The Suppliers and Users of Capital

An adequate supply of capital is essential for Canada's well-being. In manufacturing, for example, capital provides the means to expand facilities, improve productivity, increase competitiveness in domestic and foreign markets, and develop innovative, sought-after new products. When capital investment is deficient, industry slackens, unemployment rises, and living standards decline.

The suppliers and users of this necessary capital are described below.

Suppliers of Capital

The lone source of capital is savings in various forms. When revenues exceed expenditures, the investor can use savings to invest. This basic tenet applies to all of the following types of investors:

Individuals	If the compensation to postpone current consumption is high enough, individuals tend to save their money to spend it at an opportune time in the future. They become more inclined to spend when, for example, the compensation to postpone current consumption is low, or incentives, such as tax breaks, are provided.
Non-financial domestic corporations	Corporations such as Canadian steelmakers, food distributors, and machinery manufacturers generate large savings, mainly in the form of corporate earnings. However, these internally generated funds are usually retained by the corporation and are available only for internal use; they are not normally invested in other companies' stocks and bonds. Therefore, corporations are not significant providers of permanent funds to others in the capital market.
Governments	Some governments are able to operate at a surplus and invest their profits, thus becoming suppliers of capital. Other governments, who are in a less favourable position, borrow in the capital markets to fund their deficits, thus becoming users of

capital.

Foreign investors, both corporate and individual, have long regarded Canada as a good place to invest. Canada, in turn, has traditionally relied on foreign savings for both direct investment in Canadian industries and portfolio investment in Canadian securities.

Users of Capital

Users of capital may be individuals, businesses, or governments, whether Canadian or foreign.

Capital flows into Canada, from foreign individuals, businesses, and governments, and equally flows out of Canada, as foreign users of capital (mainly businesses and governments) take capital out of the country. They do so by borrowing from Canadian banks or by making their securities available to the Canadian market. Canadian capital is attractive to foreign users when its dollar value is low relative to their own currency. For their part, Canadian investors benefit from access to foreign securities by using them to diversify their investments.

Suppliers and Users of Investment Capital: A Summary

Table 2.2 summarizes who the sources and users of investment capital are and how users obtain capital.

Table 2.2 | The Sources and Users of Investment Capital

Sources of Capital

Retail investors are individual clients who buy and sell securities for their personal accounts.

Institutional investors are organizations, such as pension and mutual fund companies, that trade in large-share quantities or dollar amounts. They typically have a steady flow of money to invest.

Foreign investors Foreign direct investment in Canada tends to concentrate in manufacturing, petroleum, natural gas, mining, and smelting. Some industries have restrictions on foreign investment.

Users of Capital

Individuals need capital to finance large purchases such as houses, cars, and major appliances. They usually obtain it in the form of personal loans, mortgage loans, and charge accounts.

Businesses require massive sums of capital to finance day-to-day operations, renew and maintain plants and equipment, and expand and diversify their activities. They generate much of that capital internally, in the form of profits retained in the business. They borrow from financial intermediaries for other needs, and they raise the remainder in securities markets.

Governments are major issuers of securities in public markets, either directly or through guaranteeing the debt of their Crown corporations.

When revenues fail to meet expenditures, or when they undertake large capital projects, governments must borrow.

Sources and Users of Capital

Where does capital come from, and what is it used for? *Complete the online learning activity to assess your knowledge.*

The Financial Instruments

2 | Differentiate between the types of financial instruments used in capital transactions.

Financial instruments in the form of securities are formal, legal documents that set out the rights and obligations of the buyers (capital suppliers) and sellers (capital users) of the securities. As such, these instruments have many advantages as a means of distributing capital in a sophisticated economy. They tend to have standard features, which facilitates their trading. Both suppliers and users of capital can also choose from many types of securities to meet their particular needs.

Table 2.3 briefly describes some of the different types of financial instruments and provides examples of each type. Although you may already be familiar with some of these products, they will all be discussed in detail in later chapters of the course.

Table 2.3 | The Different Types of Financial Instruments

Financial Instrument	**Definition**	**Examples**
Fixed-income securities	Fixed-income securities (also called debt securities) formalize a relationship in which the issuer promises to repay the loan at maturity and, in the interim, makes interest payments to the investor. The term of the loan varies depending on the type of instrument.	• Treasury bills • Bonds
Equity securities	Common stock (also called common shares, equities, or shares) represent some form of ownership stake in the company that issued them. For example, if the value of a company increases, the owner of stock in that company receives a capital gain upon selling it.	• **Common shares** • **Preferred shares**
Derivatives	A derivative is a product whose value is derived from the value of an underlying instrument, such as a stock or an index. Unlike stocks and bonds, derivatives are more suited to sophisticated investors.	• Options • Forwards
Managed products	Managed products (also called investment funds) are typically pools of capital gathered from investors to buy securities according to a specific investment mandate.	• Mutual funds • Exchange-traded funds • Private equity funds
Structured products	A structured product is a financially engineered product with the characteristics of debt, equity, and an investment fund.	• Principal-protected notes • Index-linked guaranteed investment certificates

The Financial Markets

3 | Describe the distinguishing features and operation of the various types of financial markets.

So far in this chapter, we discussed the characteristics of capital, its sources, and its users. We also provided a brief introduction to the various financial instruments available. We now focus our discussion on the financial markets where people come together to complete their financial transactions.

A financial market provides a forum in which buyers and sellers meet. Instead of meeting face to face, intermediaries such as investment advisors and bond dealers act on their clients’ behalf.

Financial instruments and securities are a key element in the efficient transfer of capital from suppliers to users—an element that benefits both sides. Many of the benefits of financial instruments, however, depend on the efficient markets in which these securities can be bought and sold. A well-organized financial market provides speedy transactions and low transaction costs, along with a high degree of liquidity and effective regulation. Unlike most markets, a financial market often has no physical location. In Canada, for instance, the trading of securities, such as stocks, bonds, derivatives, takes place via electronic platforms.

The capital market is made up of many individual financial markets, including stock markets, bond markets, and **money markets**. Only short-term fixed-income securities with a term of one year or less trade in the money market.

Markets can also be categorized as **primary markets** and **secondary markets**, and further as **auction markets** and **dealer markets**. We will now discuss all of these different types of markets.

Primary and Secondary Markets

In the primary market, newly issued securities are sold by companies and governments to investors. In other words, investors purchase securities directly from the issuing company or government. Companies raise capital by selling stocks or bonds, whereas governments sell bonds only. These newly issued distributions of securities are known as IPOs, or initial public offerings.

In the secondary market, investors trade securities that have already been issued by companies and governments. In this market, buyers and sellers trade among each other at a price that is mutually beneficial to both parties, and securities are transferred from the seller to the buyer. The issuing company does not receive any of the proceeds from transactions in the secondary market; it receives payment only when the securities are first issued in the primary market. An example here is the buying and selling of stocks on the Toronto Stock Exchange.

Auction Markets

In an auction market, securities are bought and sold by investors. Investment dealers, who typically act as agents, execute the buy and sell orders on behalf of their clients. Buyers enter bids and sellers enter offers. These orders are channelled to a single central market where they compete against each other. A trade is executed only when there is a match in the bid and ask prices. Between trades, the best bid is lower than the best offer. The difference between the two prices is called the *bid-ask spread*.

Figure 2.1 shows the bid-ask spread and defines some of the basic terminology of stock trading.

Figure 2.1 | The Bid-Ask Spread

Ask Price – Bid Price = Bid-Ask Spread

- The **bid price** is the highest price a buyer is willing to pay for the security being quoted.
- The **ask price** (or offer) is the lowest price a seller will accept.
- The **bid-ask spread** is the amount that the ask price exceeds the bid price.
- The **last price** is the price at which the last trade occurred on a stock. This price can fluctuate between the bid price and the ask price as buying and selling orders are filled. Note that the last price is not necessarily the price at which a stock can currently be bought or sold. It is simply the latest price at which a

transaction occurred.

EXAMPLE

Three investors each want to buy a share of ABC Inc. They enter three bids on the company's stock of $5.00, $5.03, and $5.06.

On the other side of the trade, three investors each want to sell their share of ABC. They enter three offers to sell their stock at $5.06, $5.07, and $5.11.

Because a trade is executed only when a bid matches an offer, only one trade is executed—a trade between the investor who entered the bid of $5.06 and the seller who entered the offer of $5.06. The other bids and offers are not immediately executed. After the execution of the trade at $5.06, the best bid and offer become $5.03 and $5.07, respectively, creating a price spread of $0.04.

EXCHANGES

A **stock exchange** is an auction market where buyers and sellers of securities meet to trade with each other and where prices are established according to the laws of supply and demand. On Canadian stock exchanges, trading is carried out in common and preferred shares, rights and warrants, exchange-traded funds, income trusts, and a few convertible debentures. On some U.S. and European exchanges, bonds and debentures are traded along with equities.

Did You Know?

One property that is fundamental to the operation of the exchanges is **liquidity**. A liquid market has the following characteristics:

- Frequent trades
- Narrow price spread between bid and ask prices
- Small price fluctuations from trade to trade

The following exchanges operate in Canada:

- The **Toronto Stock Exchange** (TSX) lists equities, some debt instruments that are convertible into a listed equity, income trusts, and exchange-traded funds.
- The **TSX Venture Exchange** lists equities and a few debenture issues.
- **TSX Alpha Exchange** offers trading in securities listed on the TSX and the TSX Venture Exchange.
- The **Montréal Exchange** (or the **Bourse de Montréal**) trades all financial and equity futures and options listed for trading in Canada.
- **ICE NGX Canada** provides electronic trading, central counterparty clearing, and data services to the North American natural gas and electricity markets.
- The **Canadian Securities Exchange** lists equities of emerging companies.
- The **NEO Exchange** is an exchange that provides listing services and facilitates trading in securities listed on the NEO Exchange, TSX, and TSX Venture Exchange.

Did You Know?

TMX Group Limited is an amalgamation of TSX Group companies that include the TSX, TSX Venture Exchange, TSX Alpha Exchange, and the Montreal Exchange, creating an integrated, multi-asset class exchange group. TMX Group Limited lists, trades, clears and offers market data for both cash and derivatives markets across multiple asset classes. TMX Group Limited common shares trade on the Toronto Stock Exchange under the symbol X.

Dealer Markets

Dealer markets, or **over-the-counter** (OTC) **markets**, consist of a network of banks and investment dealers. Unlike an auction market, where the orders of individual buyers and sellers are entered in a centralized marketplace, a dealer market is a negotiated market where **market makers** post bid-and-ask quotations via electronic platforms and computer networks. In the OTC market, investment dealers typically act as principals.

Almost all bonds and debentures are sold through dealer markets. Compared to auction markets for equities, dealer markets are less visible. Perhaps surprisingly, the volume of trading (in dollars) for debt securities is significantly larger than that of the equity market.

Dealer markets are also called **unlisted markets** because securities that trade on them are not listed on an organized exchange, as they are on auction markets.

There is no central marketplace for most dealer market transactions. Instead, they are routinely conducted on the OTC market. Trades are made by means of the computer systems of inter-dealer brokers that facilitate trades between investment dealers.

Did You Know?

The Unlisted Equity Market

The volume of unlisted equity business in dealer markets is much smaller than the volume of stock exchange transactions. Although many junior issues trade OTC, the shares of some industrial companies also trade on the OTC market. For various reasons, the boards of these companies have decided not to list one or more issues of their equities on a stock exchange. The unlisted market does not set minimum listing requirements for the stocks traded on its system, nor does it attempt to regulate the companies. Many of the stocks sold on the unlisted market are more speculative and, in most cases, offer lower liquidity than listed securities.

TRADING IN THE UNLISTED EQUITY MARKET

Over-the-counter trading in equities is conducted in a similar manner to bond trading. Individual investors' orders are not entered into a centralized market and made public. Instead, investment dealers, who act as market makers, quote their own bids and offers. These market makers hold an inventory of the securities in which they have agreed to *make a market* (i.e., the securities in which they are willing to deal). They sell from this inventory to buyers and add to the inventory when they acquire securities from sellers.

The willingness of the market makers to quote bid and ask prices provides liquidity to the system (although they do have the right to refuse to trade at quoted prices). When an investor wishes to buy or sell an unlisted security, the investor's dealer consults the bid or ask quotations of the various market makers to identify the best price, and then contacts the market maker to complete the transaction. The dealer charges a commission for this service.

Over-the-Counter Derivatives Market

The OTC derivatives market is dominated by large international financial institutions, such as banks and investment dealers that trade with corporate clients and other financial institutions. Traders do not meet in person to negotiate transactions, and the market stays open 24 hours a day.

One of the attractive features of OTC derivative products is that they can be custom designed by the buyer and seller, with special features added to the basic properties of options and forwards. As a result, these products tend to be somewhat complex.

REPORTING TRADES IN THE EQUITY UNLISTED MARKET

In most of Canada, investment dealers do not have to report unlisted trades. In Ontario, however, the *Ontario Securities Act* requires that trades of unlisted securities and unquoted equity securities be reported through the web-based system of the **Canadian Unlisted Board Inc.**

Alternative Trading Systems

Along with the traditional exchanges and dealer markets, the Canadian financial markets include **alternative trading systems** (ATS). These systems are electronic marketplaces that provide automated matching and execution of trades in both the equity and fixed-income markets.

Equity Electronic Trading Systems

Alternative trading systems in the equity markets provide automated trade matching and execution of orders from multiple buyers and sellers, a role once performed exclusively by stock exchanges. The Canadian Securities Administrators allow ATSs to compete with recognized exchanges and also among other ATSs, thus providing participants with a range of options in executing trades. An ATS must be registered as an investment dealer and a member of a self-regulatory organization.

ATSs and traditional exchanges are subject to regulatory filings and provide similar trading services. However, ATSs are not permitted to carry out all of the same functions as traditional exchanges, such as the TSX. One notable difference is that ATSs trade securities that are listed on traditional exchanges, but they cannot themselves list securities.

Fixed-Income Electronic Trading Systems

With the exception of a few debentures listed on the TSX and TSX Venture Exchanges, all bond and money market securities are sold through dealer markets. In Canada, these markets include the following fixed-income electronic trading systems:

- **CanDeal** is a member of the Investment Industry Regulatory Organization of Canada (IIROC), and it is a joint venture between Canada's six largest bank-owned investment dealers. It is operated by the TMX Group Limited and is recognized as both a debt ATS and an investment dealer. It offers institutional investors access to government securities and money market instruments.
- **CBID**, and **CBID Institutional**, is an ATS that operates two distinct fixed-income marketplaces: retail and institutional. The retail fixed-income marketplace is accessible by registered dealers on behalf of retail clients. The institutional fixed-income marketplace is accessible by registered dealers, institutional investors, governments, and pension funds.
- **MarketAxess** provides market data and a trading platform with access to multi-dealer competitive pricing for a wide range of corporate bonds and other types of

fixed-income instruments. MarketAxess is a member of IIROC and operates in Ontario and Quebec.

- **CanPX** is a joint venture between several Canadian investment dealers and inter-dealer brokers (firms that facilitate trades between investment dealers). The CanPX system combines digital feeds from participating dealers to provide a composite display of real-time bid and offer quotations, in price and yield terms and with volume information. The service covers Government of Canada bonds and Treasury bills.

Auction and Dealer Markets

What are the features of the different types of markets? *Complete the online learning activity to assess your knowledge*.

KEY TERMS & DEFINITIONS

Can you read some definitions and identify the key terms from this chapter that match? *Complete the online learning activity to assess your knowledge.*

Summary

In this chapter, we discussed the following key aspects of the capital market:

- Capital has three characteristics: mobility, sensitivity, and scarcity. It can be invested directly or indirectly. An example of the first type is a house purchase. The second type might be the purchase of a company's stock.
- Individuals use investment capital for major purchases and to fund savings accounts. Businesses use capital to finance operations, plants, equipment, or growth. Governments use it to finance social programs and infrastructure. Foreign investors use Canadian capital when it costs less to borrow than other currencies.
- Bonds and debentures represent the issuers' debt, which investors purchase with a promise of repayment at maturity, usually in whole and with interest. Equity represents shares of ownership in a company, through which investors hope to profit as the company gains value.
- The financial markets facilitate the transfer of capital between investors and users, either on the primary market (where initial public offerings and other new issues are bought and sold) or the secondary market (where previously issued securities are bought and sold). The individual markets include stock markets, bond markets, and money markets.
- The markets can be further classified as auction markets and dealer markets. In an auction market, clients' bid and ask quotations for a stock are channelled to a stock exchange, where they compete against each other. Dealer markets are networks of dealers that negotiate a price with each other.

Review Questions

Now that you have completed this chapter, you should be ready to answer the Chapter 2 Review Questions.

Frequently Asked Questions

If you have any questions about this chapter, you may find answers in the online Chapter 2 FAQs.

The Canadian Regulatory Environment

Chapter Overview

In this chapter, you will learn about the Canadian regulatory environment, including the various regulatory bodies and the principles of regulation conducive to fair and open capital markets. In this context, you will learn about the various regulators and self-regulatory organizations, the purpose of regulation, and the meaning of principles-based regulation. You will also learn about the remediation options available to clients who feel they have not been well served. Finally, you will learn about the ethical standards you will be expected to uphold as a participant in the financial services industry.

learning objectives	content areas
1 | Describe the roles played by the agencies and legal entities through which the Canadian securities industry is regulated	**The Regulators**
2 | Discuss the principle that underlie securities legislation	**Regulation and Supervision**
3 | Describe the remedi options investors can access to resolve concerns they have with dealer members	**Remediation**
4 | Identify unethical practices and conduct i securities trading.	**Ethical Standards in the Financial Services Industry**

Key Terms

Key terms are defined in the Glossary and appear in **bold** text in the chapter.

arbitration

Autorité des marchés financiers

Canada Deposit Insurance Corporation

Canadian Investor Protection Fund

Canadian Securities Administrators

Client Focused Reforms

front running

full, true, and plain disclosure

gatekeeper

Investment Industry Regulatory Organization of Canada

Investment Representative

Mutual Fund Dealers Association

Mutual Fund Dealers Association Investor Protection Corporation

National Do Not Call List

National Registration Database

Office of the Superintendent of Financial Institutions

Ombudsman for Banking Services and Investments

risk capacity

risk tolerance

Securities and Exchange Commission

self-regulatory organization

Introduction

In the previous chapters, we learned how the financial markets, along with the roles of the financial intermediaries, developed over time to meet the ever-evolving needs of investors. As these components of the securities industry evolved, so did regulation in the industry. In their response to industry developments, regulators maintained a set of rules that protect investors from harm.

Investor protection is the primary goal of the regulators. However, it is not the only goal of securities regulation. The various Canadian regulatory bodies also play a key role in fostering market integrity.

But what does market integrity entail? As you learned in the previous chapters, productive investing takes place when savings are funnelled through the markets into stocks, bonds, and other securities. The issuers of those securities then use the savings to fund various projects. For this process to happen efficiently, investors must feel confident that they will be treated fairly as equal participants in the capital markets. Without the assurance that they stand to benefit from projects that they help to fund, potential investors would not have the confidence to risk their savings.

To protect market integrity, the regulators require that industry employees meet high proficiency standards through mandatory educational programs. In addition, investor protection funds are in place to protect individual investors in the unlikely event that a firm goes bankrupt. The regulatory bodies have the authority to prosecute individuals and firms suspected of wrongdoing. If fault is proven, regulators can impose penalties in the form of reprimands, fines, suspensions, and expulsion.

In this chapter, we discuss regulation in the Canadian securities industry and the various regulatory bodies that uphold the rules. We also explore what it means to operate as an investment advisor or other financial services employee in a principles-based regulatory environment.

The Regulators

1 | Describe the roles played by the agencies and legal entities through which the Canadian securities industry is regulated.

In Canada, each province and territory is responsible for creating the legislation and regulation under which a business in the securities industry must operate. In several provinces, much of the day-to-day securities regulation is delegated to securities commissions. In other provinces, securities administrators are appointed by the province to take on the regulatory function. In Quebec, the regulatory body is the **Autorité des marchés financiers**, which regulates both the securities business and Quebec's financial sector. That sector includes life and property insurance firms, providers of deposit insurance, and distributors of financial products, among others. Outside of Quebec, the financial sector is regulated separately from the securities industry by the **Office of the Superintendent of Financial Institutions** (OSFI).

The Canadian Securities Administrators

The **Canadian Securities Administrators** (CSA) is an umbrella organization of Canada's ten provincial and three territorial securities regulators designed to improve, coordinate and harmonize regulation of the Canadian capital markets. The mission of the CSA is to develop a national regulatory system that fosters fair, efficient, and vibrant capital markets in which investors are protected from unfair, improper, and fraudulent practices.

Did You Know?

The CSA has developed a number of national policies representing the regulatory framework that applies in every provincial and territorial jurisdiction.

With the increasing involvement in the investment business of federally regulated financial institutions such as banks, trusts, and insurance companies, the number of national policies issued by the CSA has increased.

The Self-Regulatory Organizations

Self-regulatory organizations (SRO) are private industry organizations to which the provincial regulatory bodies have granted the privilege of regulating their own members. SROs enforce their members' conformity with securities legislation. They have the power to prescribe their own rules of conduct and financial requirements.

SROs are delegated regulatory functions by the provincial regulatory bodies. SRO by-laws and rules are designed to uphold the principles of securities legislation. The CSA monitors the conduct of the SROs and review their rules to ensure that they are in the public's interest and do not conflict with provincial rules. SRO regulations apply in addition to provincial securities regulations. If an SRO rule differs from a provincial rule, the most stringent rule of the two applies.

Canadian SROs include the **Investment Industry Regulatory Organization of Canada** (IIROC) and the **Mutual Fund Dealers Association** (MFDA).

THE INVESTMENT INDUSTRY REGULATORY ORGANIZATION OF CANADA

IIROC oversees all investment dealers and trading activity on debt and equity marketplaces in Canada. Its mandate is "to set high quality regulatory and investment industry standards, protect investors, and strengthen market integrity while maintaining efficient and competitive capital markets".

IIROC carries out its regulatory responsibilities by setting and enforcing rules that affect its dealer members and their registered employees. It enforces the proficiency of dealer members, as well as their business and financial conduct. IIROC also sets and enforces market integrity rules regarding trading activity on Canadian equity marketplaces.

In its role as regulator, IIROC performs the following functions:

Financial compliance

Dealer members are monitored to ensure that they have enough capital to carry out their operations.

Business conduct compliance

Dealer members are monitored to ensure that policies and procedures are in place to properly supervise the handling of their client accounts.

Registration

IIROC oversees professional standards and educational programs designed to maintain the competence of industry employees.

Enforcement

IIROC enforces rules and regulations that cover the sales, business, financial practices, and trading activities of individuals and firms under IIROC's jurisdiction.

Market surveillance

IIROC's surveillance of trading and market-related activities of participants on Canadian equity marketplaces includes the following practices:

- Real-time monitoring of trading activity on stock exchanges, the Natural Gas Exchange Inc., and Alternative Trading Systems across Canada
- Ensuring dealer members comply with the timely disclosure of information by publicly traded companies in Canada
- Carrying out trading analysis and compliance with trading rules

THE MUTUAL FUND DEALERS ASSOCIATION

The MFDA is the mutual fund industry's SRO responsible for regulating the distribution and sales of mutual funds by its members in Canada. The MFDA does not regulate the mutual funds themselves; this responsibility remains with the provincial securities administrators. The MFDA has the ability to admit members, audit, enforce rules, and apply penalties.

In Quebec however, the mutual fund industry is regulated by the Autorité des marchés financiers (AMF). An agreement has been signed between the AMF and the MFDA to avoid regulatory duplication for mutual fund firms operating both in Quebec and elsewhere in Canada. The Chambre de la sécurité financière (CSF) is Quebec's SRO of the mutual fund and insurance industry. The CSF is responsible for setting and monitoring continuing education requirements and for enforcing a code of ethics for licensed representatives.

The Office of the Superintendent of Financial Institutions

As the regulatory body for all federally regulated financial institution, OSFI is an independent agency of the Government of Canada designed to contribute to the safety and soundness of the Canadian financial system. OSFI is responsible for regulating and supervising the following federally registered institutions:

- Deposit-taking institutions including banks, trust and loan companies, and co-operative credit associations
- Insurance companies, including life insurance companies, fraternal benefit societies, and property and casualty insurance companies
- Foreign bank representative offices that are chartered, licensed, or registered by the federal government
- Federally regulated pension plans

OSFI does not regulate the Canadian securities industry.

Dive Deeper

To learn more about the OSFI's regulatory and supervisory powers, visit the OSFI website.
http://www.osfi-bsif.gc.ca/Eng/Pages/default.aspx

Investor Protection Funds

The securities industry offers the investing public protection against loss as a result of the financial failure of any firm in the self-regulatory system. Account types covered under the various forms of protection include those of IIROC dealer members, MFDA members, banks, trust and loan companies, and credit unions.

Canadian Investor Protection Fund

To foster continuing confidence in the relationship between investors and their advisors, the industry created the **Canadian Investor Protection Fund** (CIPF). The primary role of the CIPF is investor protection; its secondary role is overseeing the self-regulatory system. The secondary role provides a mechanism to help CIPF contain the risk associated with its primary role.

The CIPF protects eligible customers in the event of the insolvency of an IIROC dealer member. It does not cover client losses that result from changing market values, nor does it insure accounts held at mutual fund companies, banks, or any other firms that are not members of IIROC.

The CIPF is sponsored solely by IIROC and funded by quarterly assessments on IIROC dealer members.

All customer accounts are covered, either as part of the customer's general account or as a separate account. Accounts such as cash, margin, short sale, options, futures, tax-free savings accounts, and foreign currency are combined and treated as one general account entitled to the maximum coverage of $1 million. Separate accounts, such as registered retirement accounts, registered education savings plans and trusts, are each entitled to the maximum coverage of $1 million, unless they are combined with other separate accounts.

EXAMPLE

An investor holds assets valued at $1,310,000 through their investment dealer. The assets are divided as follows: $20,000 in a cash account; $85,000 in a margin account; $940,000 in a registered retirement savings plan; $200,000 in a registered retirement income fund; and $65,000 in a registered education savings plan. If the IIROC investment dealer became insolvent, the investor would be protected in the following way, based on CIPF rules:

- The $20,000 cash account and $85,000 margin account would be combined. Total amount protected is $105,000.
- The $940,000 RRSP and $200,000 RRIF are both retirement funds and would be combined. Total amount protected is the maximum $1 million.
- The $65,000 registered education savings plan is considered a separate account. Total amount protected is $65,000.

As a result of CIPF rules, the client's assets would be protected up to a total $1,170,000.

Mutual Fund Dealers Association Investor Protection Corporation

The **Mutual Fund Dealers Association Investor Protection Corporation** (MFDA IPC) provides protection for eligible customers of insolvent MFDA member firms. The IPC does not cover customers' losses that result from changing market values, unsuitable investments, or the default of an issuer of securities.

Following the structure of the CIPF, customer accounts are covered either as part of a general account or as a separate account. Each account is eligible for up to $1 million in coverage.

The MFDA is not recognized as a self-regulatory organization in the province of Quebec. Consequently, the MFDA IPC coverage is not currently available to customers with accounts held in Quebec. The province of Quebec has its own compensation fund.

Canada Deposit Insurance Corporation

The **Canada Deposit Insurance Corporation** (CDIC) is a federal Crown Corporation that provides deposit insurance and contributes to the stability of Canada's financial system. CDIC insures eligible deposits up to $100,000 per depositor in each member institution (banks, trust companies, and loan companies), and reimburses depositors for the amount of any insured deposits if a member institution fails.

To be eligible for insurance, deposits must be held with a member institution. Eligible deposits include savings and chequing accounts, guaranteed investment certificates and other term deposits, and foreign currency. The CDIC insures eligible deposits separately for different types of accounts, each covered up to the maximum $100,000 limit.

Did You Know?

There are eight deposit categories that the CDIC covers separately up to $100,000 and include deposits held in one name, more than one name, registered retirement savings plans, registered retirement income funds, registered education savings plans, tax-free savings accounts, trusts, and registered disability savings plans.

The $100,000 maximum includes all of the client's insurable types of deposits with the same CDIC member. Deposits at different branches of the same member institution are not insured separately.

EXAMPLE

Assume that you have $80,000 cash on deposit in your own name, and in the same institution you have $120,000 on deposit in a registered retirement savings plan. If the institution were to fail, CDIC would insure your deposits in the amount of $180,000 ($80,000 fully covered for the cash deposit in your own name and a maximum of $100,000 covered for your registered retirement savings plan).

Dive Deeper

To learn more about the various forms of investor protection and how the specific terms of their coverage may differ, visit the corporations' websites:

- CDIC – https://www.cdic.ca/en/Pages/default.aspx
- CIPF – http://www.cipf.ca
- MFDA IPC – http://mfda.ca/mfda-investor-protection-corporation/mfda-ipc-coverage/

Provincial Insurance Corporations

In each province, one or more organizations exist to protect the deposits of credit union members. The various organizations have names such as deposit insurance corporation, deposit guarantee corporation, stabilization fund, stabilization corporation, stabilization board, or central credit union. Terms and maximum coverage may vary by province, so it is important to check with your province to determine the specific coverage available.

Dive Deeper

To learn more about the terms of the coverage provided by the various provincial insurance corporations, visit the website of the Financial Consumer Agency of Canada:
https://www.canada.ca/en/financial-consumer-agency.html

THE CANADIAN REGULATORY ENVIRONMENT – PART A

What are the roles of the various provincial legislative bodies, SROs, and other agencies that regulate the financial sector in Canada? *Complete the online learning activity to assess your knowledge*.

Regulation and Supervision

2 | Discuss the principles that underlie securities legislation.

In the financial services industry, rules and regulations set standards of conduct for individual investors and market participants at securities dealers. These rules are set and enforced by various government bodies. Failure to comply with them can have significant consequences, not only for the investors and firms, but for the credibility of the whole industry.

In Canada, the provincial securities commissions and SROs are the primary sources of the rules governing the industry. These organizations impose rules and restrictions to ensure market integrity, protect investors, and promote a fair and efficient securities marketplace.

Rules are not always consistent among regulators and provincial SROs or across provincial jurisdictions. A basic principle of regulation is that when two or more regulations conflict, the strictest standard applies.

Laws contained in other federal and provincial statutes also apply to the securities industry. These laws include the *Criminal Code of Canada* and legislation regarding money laundering, terrorist financing, privacy, corporate law, and bankruptcy and insolvency. Principles developed from both criminal and civil case law also apply to the industry.

Purpose of Regulation

The ongoing evolution of the securities industry presents new risks and challenges for the people who work in the industry. The past three decades have seen significant structural changes. Ownership restrictions were eliminated for securities dealers, fixed commission rates were removed, stock exchanges were demutualized, and new trading venues were introduced. Securities dealers and their representatives were also challenged by new products, heightened competition, technological advances, and demographic changes.

Did You Know?

Demutualization refers to a company that was owned by its members converting to a company owned by shareholders.

In this high-pressure environment, inadequate corporate governance at an individual firm can have a ripple effect throughout the industry. Corporate governance refers to the system of rules, policies and procedures by which a company is controlled. Rules are necessary to foster an environment of fairness and to protect the integrity of the marketplace. The extent to which a firm complies with external rules is strongly influenced by the strength of a firm's internal compliance systems. Ultimately, corporate governance represents a balancing act between the interests of a company's stakeholders, including senior management, shareholders, customers, government, and the community.

Did You Know?

Business failure or loss of reputation at one securities dealer can affect the whole industry. For example, rogue trading at one firm can cause all investors to lose confidence. Therefore, when new regulations are developed in response of a negative incident, all securities dealers must abide by them.

Regulators strive to be proactive in protecting the integrity of the capital markets, generally acting where there is a perceived need for new rules and regulations. In some cases, new rules may come about because of a market breakdown.

The regulators have four primary objectives in imposing regulation:

Consumer protection	Without assurance of protection from fraud and abusive or manipulative practices, investors would be reluctant to risk taking part in the capital markets.
Fairness	Investors must also perceive that the markets are fair, and that no participant has an unfair advantage over them.
Economic stability	The efficient flow of capital across the economy is essential for growth and stability, and to prevent disruptions to the economy through market failure.
Social objectives	Regulations support the government objective of dissuading criminal activities such as money laundering, for example.

Principles-Based Regulation

The Canadian securities industry follows a principles-based regulatory model, rather than a rules-based model. Under the principles-based approach, the regulators set objectives for securities dealers and allow the firms themselves to decide how best to meet those objectives. The objectives apply to broad issues such as proficiency and integrity of staff members, suitability of recommendations, and the responsibility of preventing client abuse of the markets. Objectives may even extend to the adequacy of capital.

Unlike a rules-based approach, which imposes detailed rules designed to provide clarity and legal certainty to market participants, a principles-based approach is clearer, simpler, and less costly to apply. It allows securities dealers to tailor their supervision and compliance functions to fit their business. It also requires good judgment in comparison to the prescriptive, rules-based approach. However, the guidance to ensure compliance that accompanies principles-based regulations is often detailed enough to be considered a rule. The courts or regulators often hold securities dealers to this standard.

Principles-based regulation requires careful analysis and monitoring by each dealer member. If a compliance failure occurs, the firm has no set standards to rely on to prove that its supervision was adequate. To convince the regulators that the firm exercised due diligence, it must provide documentation of the analyses and decisions that were made during the development, implementation, and operation of the system.

EXAMPLE

Speed limits are sometimes used as an example of rules-based versus principles-based regulation. For example, a rules-based model might state that it is illegal for you to drive faster than 100 kilometres per hour. In contrast, a principle might state that it is illegal for you to drive faster than is reasonable and prudent in all circumstances.

According to such a principle, your behaviour would be based on an individual assessment of all relevant factors. The practical difficulty is that different people would assess the same situation and arrive at different conclusions. Defending such subjective decisions after the fact may be even more problematic.

Securities Regulation in Canada

The securities industry has extensive legislation and regulation to protect investors and ensure high ethical standards. This protection flows from the SROs, as well as from the provincial and territorial regulatory authorities. Provincial securities acts are designed to regulate the underwriting, distribution, and sale of securities, and to protect buyers and sellers of securities. Formal conferences of provincial administrators are held regularly; informal consultation and co-operation among the various regulatory bodies is continuous.

In this chapter, we use the term *administrator* to mean the applicable regulatory authority, whether it is a securities commission or a government entity.

In Canada, there is no federal regulatory body for the securities industry, unlike in the United States, where the national **Securities and Exchange Commission** (SEC) has considerable regulatory authority. Many experts in the Canadian industry argue that provincial and territorial regulations should be streamlined to achieve a uniform set of laws across the country. Recent harmonization efforts to achieve this objective have focused on co-operation among the various regulatory bodies. However, the creation of a single regulator at the federal level has remained under consideration.

Disclosure

The general principle underlying Canadian securities legislation is **full, true, and plain disclosure** of all pertinent facts by those offering the securities for sale to the public. Until such facts are disclosed to the satisfaction of the designated administrator, it is illegal to offer the securities for public sale. Disclosure is normally made in a prospectus issued by the company and accepted for filing by the administrator concerned.

Generally, the securities acts use three methods to protect investors:

- Registration of securities dealers and advisors
- Disclosure of facts necessary to make reasoned investment decisions
- Enforcement of the laws and policies

The industry also relies on the SROs to ensure that their members comply with legislation.

The laws are designed to protect against fraud, as far as possible, and to prevent investment service providers from applying deceitful, high-pressure sales tactics on uninformed investors. Nevertheless, no legislation supplants the rule that investors should inform themselves before purchasing an investment. Likewise, advisors should fully investigate a product before they recommend it.

Did You Know?

Registration

Generally, every securities dealer and all of its Investment Advisors (IAs) must be registered with the applicable administrator. IAs are the employees of the security dealer who are licensed to trade and give advice to its clients in Canada. As well as granting registrations, administrators have the power to suspend or cancel registration or otherwise discipline their registrants. For registration purposes with IIROC, an IA falls under the category of *Registered Representative*. For purposes of this course, we will make reference to IA or advisor.

In the case of IIROC dealer members, all employees who deal with the investing public must register with IIROC as well as with the administrator. Such employees must meet IIROC's requirements for approval. As a minimum, they must complete the *Canadian Securities Course* and an examination based on the *Conduct and Practices Handbook* course, both offered by the Canadian Securities Institute or CSI.

To advise and sell securities to the public, new IAs must also complete a 90-day training program. After licensing, the registrant is subject to a six-month period of supervision by his or her supervisor. New registrants must also complete CSI's *Wealth Management Essentials Course* (WME) within 30 months of becoming licensed as an IA. Participation in the industry's continuing education program is also a condition of maintaining a licence.

In contrast to IAs, **Investment Representatives** (IRs) are largely employed by self-directed brokerage firms, where clients make their own investment decisions. Advisors in this category can trade in, but not provide advice to clients, on securities. The proficiency requirements for IRs are similar to those for IAs, except that the training period is 30 days, rather than 90 days, and the WME education component is not required.

At fully registered firms, employees have a fair amount of latitude in their dealings with the public. Employees at other firms, such as mutual fund dealers, are subject to limitations on their permitted activities. IAs should be aware of any such restrictions that apply to their firms.

The National Registration Database

The **National Registration Database** (NRD) is a web-based system used by investment dealers and employees to file registration forms electronically when applying for approval by a stock exchange, the CSA, or IIROC. The NRD is designed to enable a single electronic submission to satisfy all jurisdictions in Canada, rather than a registrant having to file separate registration forms in each jurisdiction. The NRD also allows regulators to verify registration status in other jurisdictions.

Investment advisors, investment representatives and the dealer member are required to notify the applicable SROs immediately, in writing, of any material changes, such as a change of address, in the original answers to the questions on the NRD application. Each dealer member is also required to immediately report to the administrators and SROs to which it belongs the termination of a registrant. If the registrant is dismissed for cause, a statement of the reasons for the dismissal must be reported.

The Gatekeeper Role

The **gatekeeper** function, long considered an important role of IAs, is the guarding of markets from possible wrongdoing by unscrupulous clients. IAs must not, through act or omission, facilitate breaches of securities laws or regulations by clients.

Gatekeepers in the securities industry include dealers and all of their employees, particularly front-line and supervisory employees. Investment Advisors who deal with clients directly must take measures to identify suspicious clients, detect and report suspicious transactions, and prevent illegal activity. To do so, they must comply with the following requirements:

- Collect and record client information that is accurate and complete.
- Monitor activity in client accounts.
- Report any suspicious transactions or proposed transactions in client accounts.

Of particular concern to gatekeepers are illegal activities, including money laundering, terrorist financing, financial fraud, and illegal insider trading.

Client Focused Reforms

There are regulatory amendments that came into force in 2021 for registrants in the securities industry. These amendments to National Instrument 31-103 and its Companion Policy are known as the **Client Focused Reforms** (or CFRs). The amendments cover key industry requirements for the know your client (KYC) and know your product (KYP) rules, conflicts of interest, suitability and relationship disclosure. The CSA developed the CFRs based on the concept that the interests of the client must come first in the client-registrant relationship so that registrants who are in an advisory role (i.e., provide investment recommendations to clients) make suitable recommendations to their clients. The CFRs amend the current KYC requirements and create a formal KYP requirement. These changes support what the regulators refer to as enhanced suitability determination obligations.

IIROC and the MFDA were involved in the development of the CFR amendments and also amended their rules, policies, and guidance.

Applying due diligence to ensure that each investment recommendation is appropriate for the client has become one of the fundamental obligations of all registrants. Industry participants refer to this as the suitability obligation. For regulators, it is critical that registrants appreciate, apply, and thoroughly document the components of suitability.

For industry participants, the CFRs were phased in during 2021. The key amendments and reforms introduced by the CFRs include a conflicts of interest amendment that came into force on June 30, 2021:

- Conflicts of Interest: The amended rule requires firms and individuals to address material conflicts of interest in the best interest of the client. The CFRs outline how these conflicts are expected to be identified, documented, addressed, and disclosed.

The remaining amendments came into force on December 31, 2021:

- **Know Your Client:** The CFRs set out an expanded list of information registrants must collect to meet their KYC obligations. The basic premise is that if you don't really know your client, how can you recommend a suitable investment strategy? Registrants must also take reasonable steps to obtain the client's confirmation of the accuracy of any information collected. The amendments also have an expectation that client information be reviewed at minimum intervals for currency and updated if the registrant becomes aware of a significant change.
- **Suitability:** The CFRs state that registrants must put client interests first when making a suitability determination. Along with KYC and KYP, registrants are expected to have appropriate information to determine whether an investment is suitable for a client and puts the client's interest first.
- **Know Your Product:** The new KYP obligation requires firms to take 'reasonable steps' to understand any securities that are purchased and sold for, or recommended to, their clients. The CFRs require firms to have policies and procedures in place to properly assess, approve, and monitor all securities they make available to clients.
- **Relationship Disclosure:** The CFRs expand the disclosure requirements to include letting clients know about potentially significant items related to investment products being offered, such as costs.

The following sections focus on these rules in greater detail.

CONFLICTS OF INTEREST

As part of the CFRs, the CSA proposed changes to the registrant conduct requirements to better align the interests of securities registrants (i.e., advisors, mutual fund sales representatives) with the interests of their clients. The goal is to improve outcomes for clients and make clearer to them the nature and terms of their relationship with registrants.

Securities dealers must develop and maintain policies and procedures to identify, disclose, and address existing and potential material conflicts involving clients. For any registrant or service provider of end clients, a conflict of interest will arise in any situation where a provider of a product or service has an interest that overlaps or diverges from that of the client being served.

Effective June 30, 2021, Part 13 of NI 31-103 required registered firms and individuals to identify, address, and disclose material conflicts of interest. Registrants must address such conflicts in the best interest of the client and provide guidance to explain when a conflict of interest is considered material.

To comply with NI 31-103, registrants must avoid material conflicts of interest if there are no appropriate controls available in the circumstances that would be sufficient to otherwise address the conflict in the best interest of the client.

The CFR changes to the conflict provisions introduce several requirements to the existing conflict rules, as noted in NI 31-103. They can be summarized as follows:

- Both firms and individual registrants acting on behalf of their firms must go through a process to identify material conflicts of interest that currently exist between a client of the firm or an individual acting on behalf of the firm.
- The material conflicts must be addressed in the best interests of the client.
- To the extent that such conflicts cannot be addressed in the best interests of the client, the material conflicts must be avoided.
- The firm must disclose any material conflict of interest that may impact a client at the time of account opening, or in a timely manner if the conflict is identified at a later time.

For each conflict identified, the disclosure provided to clients must be prominent, specific, and written in plain language outlining the following matters:

- The nature and extent of the conflict in question.
- The impact and risk it may pose to the client.
- The way in which it has been or will be addressed.

The CFR amendments specifically point out that it is not sufficient for a registrant to rely solely on disclosure as a means to satisfy its obligations under the conflict provisions. Finally, individual registrants have similar obligations to those of the firm and must report conflicts to their firm promptly.

KNOW YOUR CLIENT RULE AND SUITABILITY

The KYC and KYP obligations are foundational pre-conditions to suitability. A registrant who neglects even one may not be fully compliant with regulatory expectations. For example, a registrant who doesn't fully know their client or understand a particular product will find it difficult to make a suitable trade or product recommendation. Understanding the interplay of these "golden rules" of the securities industry (that is, KYC, KYP, and suitability) is critical.

The CFRs add to the existing KYC requirements and clarify the KYC information registrants must gather in order to meet suitability obligations. Required KYC information will include the client's:

- Personal circumstances (not limited to financial circumstances)
- Financial circumstances
- Investment knowledge
- Investment needs and objectives
- Risk profile (guidance clarifies that this includes both the customer's risk tolerance and their risk capacity)
- Investment time horizon

Did You Know?

A client's risk profile requires an understanding of their willingness to accept risk (**risk tolerance**) and their ability to endure a potential financial loss (**risk capacity**). According to NI 31-103, a client's risk profile should reflect the lower of their risk tolerance and their risk capacity.

No single question can determine a client's willingness to accept risk or endure financial loss. Behavioural-based interview questions and questionnaires can help to pinpoint how the client defines risk and how much they are willing to accept risk. The answers to a behavioural-based questionnaire, by applying a scoring system, can be used to determine a client's risk profile.

The CFRs also change the requirements with respect to confirming KYC accuracy and timeliness. These changes require registrants to:

- Take reasonable steps to obtain client confirmation that their KYC information is accurate.
- Keep KYC information current by updating it when becoming aware of a significant change.
- Review a client's KYC information every 36 months even if the registrant hasn't interacted with the client.
- Update KYC information on initial client contact and annually during your review.

Suitability means ensuring that all interactions with clients, including account opening, making recommendations, and receiving orders, take the client's unique situation into account. The CFR guidelines require that the suitability of an investment decision be conducted whenever any of the following trigger events occur:

- A trade is accepted.
- A recommendation is made.
- Securities are transferred or deposited to an account.
- There is a change of representative or portfolio manager responsible for the account.
- There is a material change to the KYC information for the account.

KNOW YOUR PRODUCT RULE

Individual representatives are responsible for understanding the products in a client's account. Equally important in making a suitability determination is an understanding of the product being recommended – how it is constructed, its features, risks, and costs, and a general idea of how it is likely to perform in various market conditions. This companion obligation of the KYC rule is referred to as the Know Your Product (KYP) rule.

Clients have a right to know what they are agreeing to purchase and a rightful expectation that their registrants know what they are selling. Without this knowledge, registrants can neither assess suitability nor explain the product's features and risks. And if they are unable to explain the product, the client, arguably, will not be able to give proper instructions to buy or sell the product in question.

Did You Know?

IIROC updated its previous KYP guidance to align with its Rule 3300, *Product Due Diligence and Know Your Product*. In this guidance, IIROC clearly lays out a firm's product due diligence responsibilities. Similar to IIROC, the MFDA amended its rules in line with the CSA's CFR initiative. Specifically, Rule 2.2.5 (Know Your

Product) is new, and amendments were applied to Rule 2.2.6 (Suitability Determination), and corresponding changes were made to Policy No. 2 (Minimum Standards for Account Supervision).

RELATIONSHIP DISCLOSURE

According to NI 31-103, to better inform clients of the nature of their account, the dealer member must provide all clients with a relationship disclosure document that includes the following information:

- A description of the nature or type of the client's account.
- The types of products and services offered by the firm.
- The types of risks that a client should consider when making an investment decision.
- A description of the risks of using borrowed money to finance a purchase of a security.
- Conflicts of interest that the firm is required to disclose.
- Operating charges and the types of transaction charges the client may be required to pay.
- The firm's complaint handling procedures.
- A statement that the firm must determine that any investment action for the client is suitable for the client and puts the client's interest first.
- A general explanation of how investment performance benchmarks might be used.
- The reporting that the client will receive, including the date on which account statements and trade confirmations will be sent and a description of the firm's obligations to provide performance information, including whether or not percentage return information will be sent.

Remediation

3 | Describe the remediation options investors can access to resolve concerns they have with dealer members.

There are times when clients feel that they have been treated unfairly by a firm that is a member of an SRO. The first step to remediation in such cases is for the client to attempt to resolve the dispute directly with the firm. If unsuccessful, the client has various options to address the dispute, other than suing the firm.

Arbitration

Arbitration is a method of dispute resolution in which an independent arbitrator is chosen to listen to the facts and arguments of both sides in the dispute. The arbitrator then decides how the dispute should be resolved and what remedy should be imposed, if any.

The SROs can only discipline member registrants; they cannot order restitution to be made to clients. Therefore, SROs offer dissatisfied investors the option of pursuing damages through arbitration, rather than in court. Arbitration is often cheaper and faster than a court action, particularly if relatively small amounts of money are concerned.

A client must receive an arbitration brochure when opening an account. If a written complaint has been received, a current brochure must be sent to the client.

If a client requests arbitration from an SRO, the securities dealer must accept both the process and the arbitrator's decision. To be eligible for arbitration, the dispute must meet the following criteria:

- Attempts have been made to resolve the dispute with the investment dealer.
- The claim does not exceed $500,000.

Claims for higher amounts may also be arbitrated, if both parties agree to the process.

The decision of the arbitrator is binding. Before the arbitration process begins, both parties must sign an agreement to give up the right to further pursue the matter in court.

Ombudsman for Banking Services and Investments

Another avenue for investors who feel that they have been treated unfairly is the **Ombudsman for Banking Services and Investments** (OBSI). This organization investigates customer complaints against financial services providers, including some banks and other deposit-taking organizations, investment dealers, mutual fund dealers, and mutual fund companies. OBSI is independent of the financial services industry.

For investors who have been unable to resolve their complaints with their financial services provider, OBSI provides a prompt and impartial resolution. The process is not binding for either the investor or the financial services provider. However, participating firms that do not agree to a recommendation by OBSI are publicly reported.

Ethical Standards in the Financial Services Industry

4 | Identify unethical practices and conduct in securities trading.

High ethical standards in the securities industry are of paramount importance, not only to the investing public, but also to the corporations that list their securities in the capital markets. If industry practices were seen to be unethical, it would be impossible for corporations to raise the money they need to expand and grow because the investing public would simply not participate.

The exchanges and the SROs have extensive rules and regulations that govern trading on an exchange and industry practices in general. Infractions may lead to fines, suspension, expulsion, and even criminal charges. In this context, unethical conduct includes any omission, negotiation, or manner of doing business that is not in the public interest nor in the interest of the exchange, in the opinion of the disciplinary body.

Examples of Unethical Practices

The following practices are examples of conduct that is considered unethical by the regulators:

- Deceiving the public, the buyer, or the vendor as to price of any transaction or the value of any security

- Creating, or attempting to create, a false or misleading appearance of active public trading in a security in an effort to make a profit
- Entering, or attempting to enter, into any arrangement to sell and repurchase a security in an effort to manipulate the market
- Making a fictitious trade that involves no change in the beneficial ownership of a security in an effort to mislead the public
- Using high-pressure or otherwise undesirable selling techniques
- Violating any statute applicable to the sale of securities
- Misleading a client as to the risk involved in purchasing a specific security
- Trading in one's own account before effecting the same trade for a client (a practice known as **front running**)
- Conducting oneself in a way that would bring the securities business, the exchanges, or IIROC into disrepute

Securities dealers are responsible for the acts or omissions of all their employees. In terms of discipline, unethical conduct of an advisor may be handled as though it were also the conduct of the securities dealer itself.

Prohibited Sales Practices

Securities legislation prohibiting certain types of selling activities exists for very good reasons. Such regulations are designed to curb unethical behaviour, dishonest conduct, and high-pressure selling tactics.

In the role of an IA, it is of vital importance that you study the rules applicable in your province and conform carefully to all the requirements. You should also be constantly aware of all changes in the law and immediately conform to such changes.

National Do Not Call List

IAs often use the telephone as a tool to solicit new clients. By doing so, you are considered to be a telemarketer by the Canadian Radio-television and Telecommunications Commission (CRTC). The CRTC has established rules that telemarketers and the organizations that hire them must follow. In particular, all telemarketers must subscribe to the **National Do Not Call List** (DNCL). The DNCL rules prohibit telemarketers and clients of telemarketers from calling any number that has been registered on the DNCL for more than 31 days. As an advisor, you must follow these rules unless you are making calls that are specifically exempted.

The term *telemarketing* is broadly defined to include sales or prospecting calls. Telemarketing firms must remove persons included in the DNCL from their calling lists.

Dive Deeper

To learn more about the National Do Not Call List, visit the website of the Canadian Radio-television and Telecommunications Commission.

REGULATION AND REMEDIATION

Can you use your knowledge to assess various aspects of securities regulation, remediation and ethical standards? *Complete the online learning activity to assess your knowledge*.

THE CANADIAN REGULATORY ENVIRONMENT - PART B

What are the roles of the various provincial legislative bodies, SROs, and other agencies that regulate the financial sector in Canada? *Complete the online learning activity to assess your knowledge*.

CASE SCENARIO

Can you help settle a disagreement between Alicia and Li about how investor protection works? *Complete the online learning activity to assess your knowledge.*

KEY TERMS & DEFINITIONS

Can you read some definitions and identify the key terms from this chapter that match? *Complete the online learning activity to assess your knowledge.*

Summary

In this chapter we discussed the following aspects of the Canadian regulatory environment:

- The capital markets in Canada are regulated by provincial and territorial administrators who typically delegate authority to SROs. The SROs enforce member conformity with securities legislation and prescribe their own rules of conduct.
- IIROC is the SRO that deals with all investment dealers and trading regulation in the debt and equity markets. The MFDA deals with the distribution side of the mutual fund industry.
- Clients of IIROC member firms are protected against loss in case of insolvency by the CIPF. Clients of MFDA member firms have the same protection through MFDA IPC.
- Securities legislation is designed to protect investors by three means: (1) registration of securities dealers and advisors, (2) disclosure of facts necessary to make reasoned investment decisions, and (3) enforcement of laws and policies.
- Regulatory amendments, known as the Client Focused Reforms, came into force in 2021. The amendments were developed based on the concept that the interests of the client must come first. The reforms focused on KYC, KYP, suitability, conflicts of interest, and relationship disclosure.
- Unethical conduct is defined as any omission, conduct, or manner of doing business that, in the opinion of the disciplinary body, is not in the interest of the public or the exchange.

Review Questions

Now that you have completed this chapter, you should be ready to answer the Chapter 3 Review Questions.

Frequently Asked Questions

If you have any questions about this chapter, you may find answers in the online Chapter 3 FAQs.

SECTION 2

THE ECONOMY

Overview of Economics

Economic Policy

Overview of Economics

Chapter Overview

This chapter provides an introduction to economics, wherein you will learn about the effect of microeconomic and macroeconomic environments on the financial markets. You will learn how economic growth is measured, and how certain factors determine the health of the economy and help predict the direction the markets might take. You will also learn to understand the indicators that influence investment decision-making, including the phases of the business cycle, the condition of the labour market, and the current state of interest rates. Finally, you will learn to analyze the effect of international economics on the domestic investing environment.

learning objectives	content areas
1 | Define economics a describe the process fo achieving market equilibrium.	**Defining Economics**
2 | Describe the proces measuring gross dome product and productivity gains in the economy	**Measuring Economic Growth**
3 | Differentiate betwee business cycle phases an economic indicators used to analyze current and long-term economic growth	**The Business Cycle**
4 | Compare and contra labour market indicator and the types of unemployment	**The Labour Market**
5 | Describe how intere rates affect the performa of the economy	**The Role of Interest Rates**
6 | Describe inflation an the impact it has on the economy	**The Impact of Inflation**
7 | Analyze how trade between nations takes place through the balan of payments and via the exchange rate.	**International Finance and Trade**

Key Terms

Key terms are defined in the Glossary and appear in **bold** text in the chapter.

balance of payments

business cycle

coincident indicators

Consumer Price Index

cost-push inflation

cyclical unemployment

deflation

demand

demand-pull inflation

discouraged workers

disinflation

economic indicators

economics

equilibrium price

exchange rate

final good

frictional unemployment

gross domestic product

inflation

interest rates

labour force

lagging indicators

leading indicators

macroeconomics

market economy

microeconomics

natural unemployment rate

negative interest rates

nominal gross domestic product

nominal interest rate

participation rate

Phillips curve

productivity

real gross domestic product

real interest rate

seasonal unemployment

structural unemployment

supply

underemployed

unemployment rate

Introduction

Economic news and events are announced regularly, including monetary policy reports from the Bank of Canada, quarterly gross domestic product estimates, fluctuations in the value of the Canadian exchange rate relative to our trading partners, and monthly data on employment and housing starts. To make wise decisions, investors and advisors should consider the impact these events could have on markets and individual investments.

To understand economics is to understand the choices people make and how the sum of those choices affects the production, distribution, and consumption of goods and services. Whether it is the purchase of groceries, a home, or stocks and bonds, the interaction between consumer choices and participants in the economy takes place in an organized market. In such a market, prices are determined by demand and supply for goods and services by consumers, businesses, and governments.

An example of an organized market is the Toronto Stock Exchange, where investors come together to buy and sell securities. Millions of transactions carried out each day create a market and establish an **equilibrium price** for these securities. The buyer and seller of a security clearly have different views about the security. Generally, the buyer believes it will go up in value; the seller believes it will go down. It is likely that some type of economic analysis went into their decisions to buy or sell.

Our goal in this chapter is to provide you with a basic understanding of the key economic variables that affect the state of our economy and, consequently, the investment decisions of market participants. As a participant in the securities industry, you should pay daily attention to economic events and consider their impact on individual investments.

Defining Economics

1 | Define economics and describe the process for achieving market equilibrium.

Economics is a social science that focuses on an understanding of production, distribution, and consumption of goods and services. More specifically, the focus is on how consumers, businesses, and governments make choices when allocating resources to satisfy their needs. The sum of those choices determines what happens in the economy.

A **market economy** is an economic system where the decisions regarding investment, production, and distribution of goods and services are guided by the price signals created by the forces of supply and demand. The decisions made by consumers, businesses, and governments help to determine the proper allocation of resources. Ultimately, the interaction between these market participants determines what we pay for a good or service, or for a stock, bond, or mutual fund.

EXAMPLE

With an increase in high-speed internet infrastructure and social media platforms, consumers have shifted their spending away from traditional video rental stores toward the convenience of online streaming service providers. This shift in consumer demand has resulted in falling profits and stock prices for publicly traded companies that catered to that market. In fact, one of the largest retailers in North America, which had at one time as many as 60,000 employees and more than 8,000 retail outlets, eventually filed for bankruptcy protection.

Microeconomics and Macroeconomics

Economics comprises two areas of study: **microeconomics** and **macroeconomics**:

- Microeconomics generally applies to individual markets of goods and services. It looks at how businesses decide what to produce and who to produce it for, and how individuals and households decide what to buy.
- Macroeconomics focuses on broader issues such as employment levels, **interest rates**, **inflation**, recessions, government spending, and the overall health of the economy. It also deals with economic interactions between countries in our increasingly connected global economy.

Some of the contrasts between the two areas are shown in Table 4.1.

Table 4.1 | Microeconomics and Macroeconomics

Microeconomic Concerns	Macroeconomic Concerns
• How are the prices for goods and services established?	• Why did the economy stop growing last quarter?
• Why has the price of bread gone up?	• Why did the number of jobs fall in the last year?
• Will lower interest rates stimulate growth in the economy and company profit margins?	• How do minimum wage laws affect the supply of labour?
	• How can a nation improve its standard of living?
• How would a tax on softwood lumber imports affect growth prospects in the forestry industry?	• Why do stock prices rise when the economy is growing?
	• How is inflation controlled?
• If a government places a tax on the purchase of mutual funds, will	

consumers stop buying them?

The Decision Makers

The three broad groups that interact in the economy include *consumers*, *businesses*, and *governments*:

- Consumers set out to maximize their satisfaction and well-being within the limits of their available resources, which might include income from employment, investments, or other sources.
- Businesses set out to maximize profits by selling their goods or services to consumers, governments, or other businesses.
- Governments spend money on education, health care, employment training, and the military. They oversee regulatory agencies, and they take part in public works projects, including highways, hydroelectric plants, and airports.

The decisions these groups make, and the ways they interact with each other, ultimately affect the state of the economy.

The Market

The activity between consumers, businesses, and governments takes place in the various markets that have developed to make trade possible.

A market is any arrangement that allows buyers and sellers to conduct business with one another. Most markets in the financial services industry are not physical. Interactions between buyers and sellers of securities, for example, are facilitated by intermediaries and conducted electronically.

DEMAND, SUPPLY, AND MARKET EQUILIBRIUM

The price of a product is one of the most important factors to determine how much of that product people buy or sell in the marketplace. Everything has a price, and financial products and services are not exempt. Stocks, bonds, commodities, and currency all have visible prices that allow people to make investment decisions.

Demand for and **supply** of a product in the marketplace largely determines the price paid for the product. Two general economic principles help to explain the interaction between demand and supply (assuming other factors remain constant):

1. The quantity demanded of a good or service is the total amount consumers are willing to buy at a particular price during a given period. The higher the price, the lower the demand; and the lower the price, the higher the demand.
2. The quantity supplied of a good or service is the total amount that producers are willing to supply at a particular price during a given period. The higher the price of a good, the greater the quantity supplied.

The interaction that takes place between buyers and sellers in the market ultimately determines an equilibrium price for that product. At this price, the number of buyers and sellers is in balance. In a state of market equilibrium, anyone who wants to buy the product can do so, and anyone who wants to sell the product can do so.

The figure and table below show how market equilibrium in the market for a particular product is established based on demand by consumers and supply by producers.

Figure 4.1 shows that the equilibrium price of a particular product is $2,000, and the quantity supplied is 200 units. If the producer tries to sell the product at a higher price, it will have unsold inventory. If the price is set too low, demand for the product will not be satisfied, and the supplier would be able to increase the price.

Figure 4.1 | Equilibrium in the Market for a Product

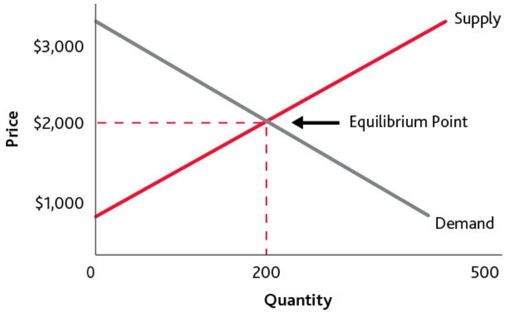


Table 4.2 lists the quantities demanded and the quantities supplied at each price level. The one price that ensures a balance between the quantity demanded and the quantity supplied is $2,000. This intersection yields an equilibrium price of $2,000 and an equilibrium supply of 200 units.

Table 4.2 | Equilibrium in the Market for a Product

Price	Quantity Demanded (Units)	Quantity Supplied (Units)
$1,000	[illegible]	[illegible]
$1,500	[illegible]	[illegible]
$2,000	200	200
$2,500	[illegible]	[illegible]
$3,000	[illegible]	[illegible]

EXAMPLE

Demand and supply are equal forces in regulating the price of financial instruments. Consider the following two scenarios:

- The housing market in Asia is growing rapidly, which results in increased demand for Canadian lumber products. The demand for Canadian dollars rises because manufacturers in Asia need to purchase products from Canada with Canadian dollars. The increased demand results in an increase in the price of the Canadian dollar. Investors see the increased demand for Canadian lumber and choose to invest in companies exporting lumber, which causes the stock price of the company to increase.
- If a corporation reports poor financial performance, investors who own stock in the company may decide to sell their common shares. The increased supply of the company's common shares in the marketplace results in a decrease in the price of the shares.

Measuring Economic Growth

2 | Describe the process for measuring gross domestic product and productivity gains in the economy.

Economic growth occurs when an economy is able to produce more output over time. By measuring this growth, we can better understand the overall health of the entire economy.

Gross Domestic Product

Gross domestic product (GDP) is the total market value of all the **final goods** and services produced in a country over a given period. Economic growth is measured by the increase in GDP from one period to the next.

Did You Know?

A final good is something purchased by the ultimate end user. Intermediate goods are products used in the manufacture of final goods. For example, a computer is a final good, whereas the computer chip inside it is an intermediate good, because it is a part of the computer. Only the market value of the computer, the final good, is included in GDP. If the market value of all the computer chips were added together with the market value of all the computers, GDP would be overstated.

Monthly and quarterly GDP reports are used to keep track of the short-term activity within the market, whereas annual reports are used to examine trends, changes in production, and fluctuations in the standard of living.

THREE METHODS TO MEASURE GDP

There are three generally accepted ways of measuring GDP: the *expenditure approach, income approach*, and *production approach*. These methods set out to give an approximation of the monetary value of all the final goods and services produced in the economy. The three approaches generally produce the same number.

Expenditure approach

The expenditure approach to calculating GDP adds up everything that consumers, businesses, and governments spend money on during a certain period. Included in the calculation are business investments and all the exports and imports that flow through the economy.

Income approach

The income approach starts from the idea that total spending on goods and services should equal the total income generated by producing all those goods and services. GDP using the income approach adds up all the income generated by this economic activity.

Production approach

The production approach, also known as the value-added approach, calculates an industry or sector's output and subtracts the value of all goods and services used to produce the outputs. For example, if the computer industry produced a total of \$5 billion in computers and spent \$2 billion on goods and services to produce the computers, the value added to GDP by the computer industry would be \$3 billion. Adding up the value-added contributions of the various economic sectors produces a country's total GDP for the measurement period.

Figure 4.2 illustrates the more common expenditure approach formula to calculating GDP.

Figure 4.2 | Expenditure Approach to Calculating Gross Domestic Product

$$GDP = C + I + G + (X - M)$$

Where:

C = consumer expenditures

I = business spending and investment

G = government spending

$X - M$ = the amount of exports (X) and imports (M) that consumers and businesses buy during the period

Did You Know?

What is the purpose of M in the expenditure approach GDP formula?

The C, I, and G factors are tallies of all goods and services purchased by consumers, businesses, and governments, and each tally includes expenditures on imports. So rather than try to exclude import transactions each time an imported product or service is purchased, it is easier to add all of the consumption in the formula and then subtract imported goods and services to factor out expenditures on goods produced outside of Canada. Since exports are added to GDP, and exports are the opposite of imports, the formula groups X and M together and refers to this part of the formula as net exports.

REAL AND NOMINAL Gross Domestic Product

In general, when a nation produces more goods and services, its standard of living improves. However, if the increase in GDP is simply the result of higher prices, then the cost of living increases but the standard of living does not improve. Economists' term for the condition of rising prices is inflation.

Nominal gross domestic product (nominal GDP) is the dollar value of all goods and services produced in a given year at prices that prevailed in that same year. However, changes in nominal GDP from year to year can be misleading because they reflect not only changes in output but also changes in the prices of goods and services.

An increase in nominal GDP can occur in the current year compared to the previous year for either or both of two reasons:

1. The economy expanded, and more goods and services were produced in the current year than in the previous year; thus, the nation was more productive.
2. Prices increased, and consumers had to pay more for goods and services in the current year than they did in the previous year; thus, the nation experienced inflation.

To measure a nation's true productivity in a year, we need to look at **real gross domestic product** (real GDP). This measure removes the changes in output that are attributable to inflation and allows us to see how much GDP has grown, based solely on productivity.

EXAMPLE

Assume the financial press reports that nominal GDP grew by 4.4% last year and prices rose by 1.1%. Is this a good outcome for the economy?

In nominal terms, the economy grew by 4.4%, which is a good amount of economic growth. However, when we adjust by 1.1% for the effect of rising prices, real economic growth was actually 3.3% (4.4% – 1.1%). The nation was more productive this year than last, but not as much as the nominal GDP might lead you to believe.

However, what if the financial press reported that nominal GDP grew by 2.4% last year, whereas prices rose by 3.1%? Is this bad news for the economy?

In nominal terms, the economy grew by 2.4%, but if we adjust by 3.1% for inflation, we see that the economy actually shrank by approximately 0.7% (2.4% – 3.1%). Real GDP growth therefore was negative, which means that the nation was actually less productive last year than the year before.

Productivity and Determinants of Economic Growth

Economists use the term **productivity** to describe output (e.g., GDP) per unit of input (e.g., the labour and capital used to produce the goods and services). When productivity increases, more is produced with less expenditure, creating a net benefit for the economy. There is a link between growth in real GDP and productivity gains. If the ultimate goal is to improve productivity, how does an economy achieve this outcome?

Growth in GDP results from a variety of factors, but a few key factors contribute to gains in productivity:

- Technological advances
- Population growth
- Improvements in training, education, and skills

These factors contribute to growth in GDP and make nations wealthier.

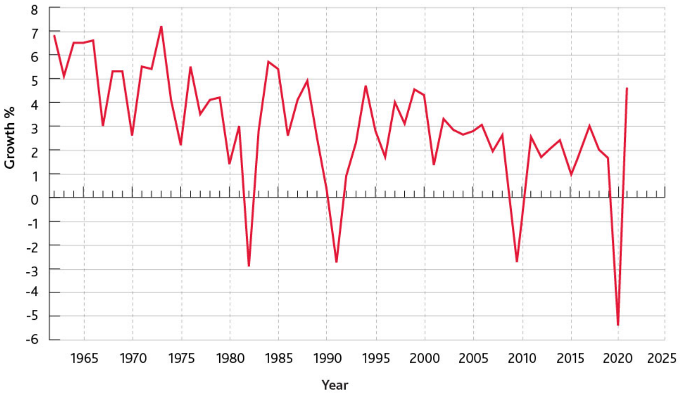
The Business Cycle

3 | Differentiate between business cycle phases and economic indicators used to analyze current and long-term economic growth.

The economy tends to move in cycles that include periods of economic expansion followed by periods of economic contraction. These fluctuations, which directly affect the value of investments over time, are called **business cycles**.

This concept is illustrated in Figure 4.3, which shows the annual percentage growth of GDP in Canada over several decades. In this diagram, we can see that real GDP has grown on average by about 3.4% since the 1960s. However, growth has not been uniform over that time. It was most rapid in the 1960s, but several periods of negative growth occurred over the past three decades. During years in which growth was negative, our GDP declined. Note that the annual chart reflects the impact of the worldwide pandemic that affected Canadian and other economies around the world starting in the first quarter of 2020.

Figure 4.3 | Annual Growth Rate in Canada's Real Gross Domestic Product

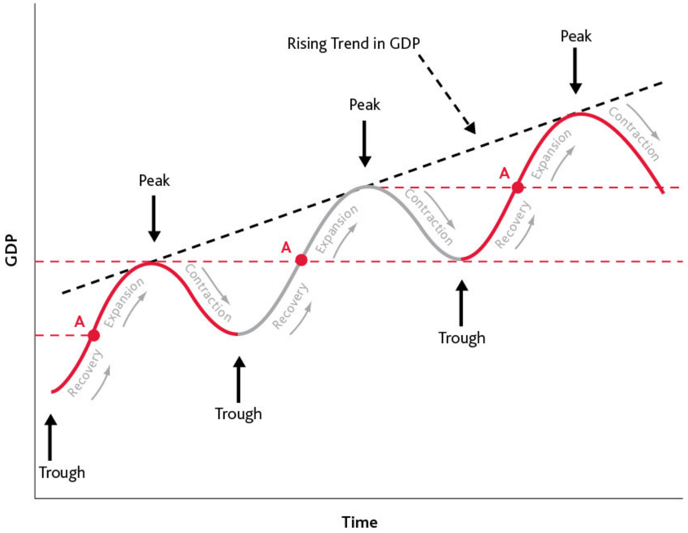


Source: Statistics Canada

Phases of the Business Cycle

Expansion or growth in the economy is measured by the increase in real GDP while contraction is measured by a decrease in real GDP. The term *cycle* suggests a regular and predictable pattern, but in reality, fluctuations in real output are both irregular and unpredictable. This irregularity makes each business cycle unique. Nonetheless, a relatively typical sequence of events occurs over the course of a business cycle. This sequence of *expansion*, *peak*, *contraction*, *trough*, and *recovery* is illustrated in Figure 4.4.

Figure 4.4 | Phases of the Business Cycle



EXPANSION

An expansion is a period of significant economic growth and business activity during which GDP expands until it reaches a peak. An economic expansion is characterized by the following activities:

- Inflation, and therefore the rise in prices of goods and services, is stable.
- Businesses adjust inventories and invest in new capacity to meet increased demand and avoid shortages.
- Corporate profits rise.
- New business start-ups outnumber bankruptcies.
- Stock market activity is strong, and the markets typically rise.
- Job creation is steady, and the **unemployment rate** is steady or falling.

PEAK

The peak of the business cycle is the top of the cycle between the end of an expansion and the start of a contraction. A peak is characterized by the following activities:

- Demand begins to outstrip the capacity of the economy to supply it.
- Labour and product shortages cause wage and price increases, and inflation rises accordingly.
- Interest rates rise and bond prices fall, which dampens business investment and reduces sales of houses and other big-ticket consumer goods.
- Business sales decline, resulting in accumulation of unwanted inventory and reduced profits.
- Stock prices generally begin to fall along with falling profits, and stock market activity declines.

CONTRACTION

A contraction is a decline in economic activity. The financial press might refer to this phase as negative GDP. If the contraction lasts at least two consecutive quarters, the economy is considered to be in recession. A contraction is characterized by the following activities:

- Economic activity begins to decline, and real GDP decreases.
- Faced with unwanted inventories and declining profits, businesses reduce production, postpone investment, curtail hiring, and may lay off employees.
- Business failures outnumber start-ups.
- Falling employment erodes household income and consumer confidence.
- Consumers react by spending less and saving more, which further cuts into sales and further fuels the contraction.
- Stock market price falls lower.

Did You Know?

We live in a global economy. We export and import billions of dollars in goods and services each day. Therefore, Canadian consumers and businesses are affected by the state of the economy of our trading partners. For example, if the United States is in a contraction or recession, Canada's exports to the United States decline, which has a negative impact on our GDP. When major U.S. customers stop buying products and paying bills, Canadian export companies are directly affected. Canadian companies may then struggle to repay their loans, and the risk of lending money to them increases. Therefore, lenders charge higher interest rates, which further increases the companies' struggle to remain profitable.

TROUGH

As contraction continues, falling demand and excess capacity curtail the ability of businesses to raise prices and of workers to demand higher salaries. The growth cycle reaches a trough, its lowest point. A trough is characterized by the following activities:

- Interest rates fall, triggering a bond rally.
- Inflation falls.
- Consumers who postponed purchases during the contraction are spurred by lower interest rates and begin to spend.
- Stock prices rally.

RECOVERY

During recovery, GDP returns to its previous peak. The recovery typically begins with renewed buying of items such as houses and cars, which are sensitive to interest rates. A recovery is characterized by the following activities:

- Businesses that reduced inventories during the contraction must increase production to meet new demand.
- They are typically still too cautious to hire back significant numbers of workers, but the period of widespread layoffs is over.
- Businesses are not yet ready to make a significant new investment.
- Unemployment remains high, wage pressures are restrained, and inflation may decline further.

When the economy rises above its previous peak, at point A in Figure 4.4, another expansion has begun.

Economic Indicators

Economic indicators provide information on business conditions and current economic activity. They can help to show whether the economy is expanding or contracting. For example, if certain key indicators suggest that the economy is going to do better in the future than had previously been expected, investors may decide to change their investment strategy.

Economic indicators are classified as leading, coincident, or lagging:

- **Leading indicators** tend to peak and trough before the overall economy. They anticipate emerging trends in economic activity by indicating what businesses and consumers have actually begun to produce and spend.
- **Coincident indicators** change at approximately the same time and in the same direction as the whole economy, thereby providing information about the current state of the economy.
- **Lagging indicators** change after the economy as a whole changes. These indicators are important because they can confirm that a business cycle pattern is occurring.

Examples of the different types of indicators are described in Table 4.3.

Table 4.3 | **Using Economic Indicators**

Leading Indicators	
Housing starts	When a permit is issued to build a house, it indicates that building supplies will be bought and workers will be hired. The owner will then spend more money on new appliances and furnishings.
Manufacturers' new orders	New orders by manufacturers indicate expectations that consumers will purchase more items, such as automobiles and appliances.
Commodity prices	Rising or falling commodity prices reflect rising or falling demand for raw materials.
Average hours worked per week	The average number of work hours rises or falls depending on the level of output, and therefore indicates changes in employment levels.
Stock prices	In general, changes in stock prices indicate changing levels of profit.
	The money supply represents available liquidity and therefore has an impact on interest rates.
Coincident Indicators	
Personal income GDP Industrial production Retail sales	When personal income is rising, people have more money to spend, which encourages an increase in GDP, industrial production, and retail sales.
Lagging Indicators	
Inflation rate Labour costs Private sector plant and equipment spending Business loans and interest rates	Unemployment is a key lagging indicator. Unemployment rates go up or down in response to other factors. For example, when businesses are confident that a recession or contraction is over, they start hiring again. The unemployment rate then falls and labour costs go up. Likewise, as the economy recovers, businesses can be expected to spend more on plants and equipment and borrow more money to fund growth.

Identifying Recessions

Statistics Canada judges a recession by the *depth*, *duration*, and *diffusion* of the decline in business activity. Its judgment is based on the following criteria:

Depth	The decline must be of substantial depth. For example, marginal declines in output can be merely statistical errors.
Duration	The decline must last more than a couple of months. For example, bad weather alone can cause a temporary decline in output.
Diffusion	The decline must be a feature of the whole economy. For example, a strike in a major industry can cause GDP to decline, but that lone incident does not constitute a recession for the whole country.

Did You Know?

The Labour Market

4 | Compare and contrast labour market indicators and the types of unemployment.

Statistics Canada defines the working-age population as people 15 years of age and older. It further divides this population into three groups:

- Those who are unable to work
- Those who are not working by choice
- The **labour force**

The working population that falls under each of those three groups is identified in Table 4.4.

Table 4.4 | The Working Age Population

Unable to work	Not working by choice	The labour force
People in: • Hospitals • Correctional facilities	• Full-time students • Homemakers • Retirees • **Discouraged workers**	People working • People who are not working but are actively looking for work

Labour Market Indicators

There are two key indicators that describe activity in the labour market: the **participation rate** and the unemployment rate.

- The participation rate represents the share of the working-age population that is in the labour force. This rate is an important indicator because it shows the willingness of people to enter the workforce and take jobs.
- The unemployment rate represents the share of the labour force that is unemployed and actively looking for work. This rate may rise when the number of people that are employed falls or when the number of people looking for work rises (or when both occur at once).

Both of these rates are calculated as follows.

$$\text{Participation Rate} = \frac{\text{Labour Force}}{\text{Working Age Population}} \times 100$$

$$\text{Unemployment Rate} = \frac{\text{Not Working but Actively Looking for Work}}{\text{Labour Force}} \times 100$$

EXAMPLE

Assume that a country has 25 million people of working age. Of those 25 million, 19 million are working and 1 million are not working but are actively looking for work. The remaining 5 million people are not working and not actively looking for work. Some people in this group are students, some are retired, and some are discouraged and have stopped looking for work.

Using these figures to calculate the country's participation rate, you would enter the numbers into the following equation as follows:

$$\text{Labour Force} = 19\,\text{M} + 1\,\text{M} = 20\,\text{M}$$

$$\text{Participation Rate} = \frac{20\,\text{M}}{25\,\text{M}} \times 100 = 80\%$$

The unemployment rate is defined as the share of the labour force that is unemployed and actively looking for work.

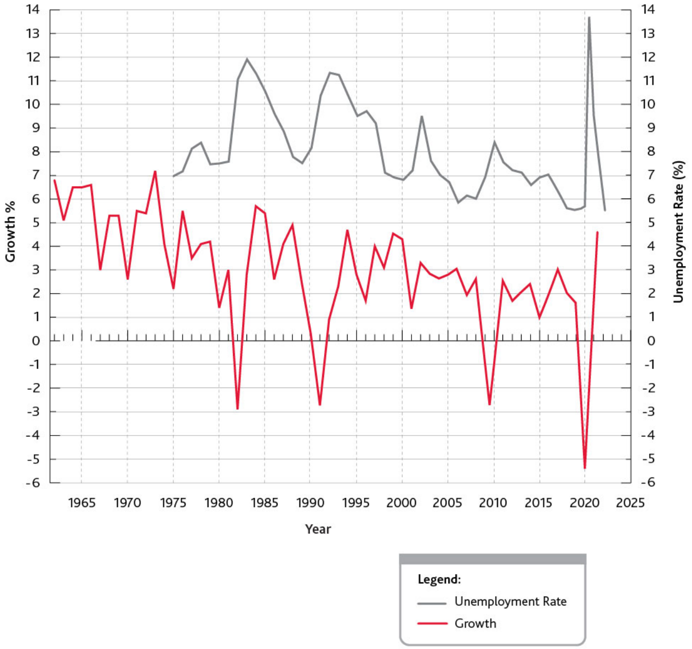
Using these figures to calculate the country's unemployment rate, you would enter the numbers into the following equation as follows:

$$\text{Unemployment Rate} = \frac{1\text{M}}{20\text{M}} \times 100 = 5\%$$

In Canada, the participation rate has increased since the 1960s, primarily because of the increased participation of women in the workforce. The current participation rate as of February 2022 is about 65.4%. For the past decade, Canada's participation rate averaged approximately 65.5%. The participation rate is a key measure of the productivity of a society. A society where only 50% of the working-age population is willing to work is not as productive as a society where 70% of the working-age population is willing to work.

Figure 4.5 shows the patterns in the annual Canadian unemployment rate since the 1960s. In general, the upward trend with large fluctuations corresponds to the trend and stages of the business cycle. In this figure, you can see a strong correlation between declining GDP that occurs in recessionary periods and increased unemployment. Though the monthly unemployment rate in Canada jumped from 5.6% in February 2020 to 7.8% in March and to 13.0% in April as a result of measures taken against the worldwide pandemic, the annual unemployment rate dropped to 5.5% in February 2022.

Figure 4.5 | Annual Unemployment Rate in Canada (%)



Source: Statistics Canada

Some detractors argue that flaws exist in the way unemployment is measured. For example, it does not address the fact that some people are unemployed for a short time, whereas others are unemployed for long periods. The average duration of unemployment varies over the business cycle; it is typically shorter during an expansion and longer during a recession.

At times, job prospects are so poor that some unemployed people simply drop out of the labour force and become discouraged workers, people who are available to work but have given up their search because they cannot find jobs. If too many workers become discouraged workers, the unemployment rate actually falls because the people in this segment of the population are no longer considered part of the labour force, and therefore are not considered unemployed.

Detractors also argue that many people who are part of the labour force are considered **underemployed**. These are people who are working part-time, often at jobs that do not make good use of their skills, when they would rather be working full-time. Because the people in this group have jobs, the unemployment rate is lower than it would be if these people were unemployed. However, the low rate does not reflect the nation’s loss of productivity.

Types of Unemployment

There are four general types of unemployment: *cyclical*, *seasonal*, *frictional*, and *structural*.

Cyclical unemployment As the name suggests, **cyclical unemployment** is tied directly to fluctuations in the business cycle. It rises when the economy weakens, and workers are laid off in response to lower sales; it drops when the economy strengthens again.

Seasonal unemployment Some industries operate only during part of the year. For example, farmhands are hired to pick fruits and vegetables only during the months of June to October. In the winter months, **seasonal unemployment** is a regular occurrence in such industries.

Frictional unemployment consists of the normal labour turnover that occurs when people enter and leave the workforce, and during the ongoing creation and destruction of jobs. Even in the best of economic times, people can be out of work for various reasons, including having recently finished school, having quit a job, having been laid off from work, or having been fired. This type of unemployment is a normal part of a healthy economy. It declines when jobs are matched more efficiently to potential workers.

Structural unemployment reflects a mismatch between jobs and potential workers. It occurs when workers are unable to find work or fill available jobs because they lack the necessary skills, do not live where jobs are available, or decide not to work at the wage rate offered by the market. This type of unemployment is closely tied to changes in technology, international competition, and government policy. It typically lasts longer than frictional unemployment because workers must retrain or possibly relocate to find a job.

Frictional and structural factors in the economy will always exist. Therefore, the unemployment rate can never fall to zero, not even in times of healthy economic growth. The minimal level, below which unemployment does not drop, is called the **natural unemployment rate**.

At this level of unemployment, the economy is thought to be operating at close to its full potential. At that level, all resources, including labour, are fully employed. Further employment growth is achieved either through increased wages to attract people into the labour force, which fuels inflation, or by more fundamental changes to the labour market that remove impediments to job creation.

Measuring Growth

How do you measure economic growth, and what are the key factors that influence that growth? *Complete the online learning activity to assess your knowledge*.

The Role of Interest Rates

5 | Describe how interest rates affect the performance of the economy.

Interest rates are an important link between current and future economic activity. For consumers who save rather than borrow for a major purchase, interest rates represent the gain made from deferring consumption. Conversely, for people that borrow, they represent the price of borrowing to buy something today rather than postponing the purchase. For businesses, interest rates represent one component of the cost of capital—that is, the cost of borrowing money. Therefore, the rate of growth of the capital stock, which determines future output, is related to the current level of interest rates.

Interest rates are essentially the price of credit. Changes in interest rates reflect, and affect, the demand and supply for credit and debt, which has direct implications for the bond and money markets. Changes in interest rates through monetary policy decisions made by the Bank of Canada also have broad implications for the entire economy. For example, when interest rates rise, the cost of borrowing also increases. Higher borrowing costs can have a negative impact on the profits of businesses that need to borrow, which in turn may cause their share prices to fall.

Determinants of Interest Rates

A broad range of factors influences interest rates. Some of those factors are described below:

Demand and supply of capital

A large and sustained boom in business investment raises the demand for capital and forces interest rates to rise. Therefore, unless there is an equivalent increase in the supply of capital, the price of credit also rises. In turn, higher interest rates may encourage government, businesses, and consumers to save more. An increase in savings may reduce demand for borrowing, which in turn may reduce interest rates.

Default risk

If interest rates rise, consumers and businesses may have trouble paying back borrowed funds or default on loans. The greater the risk of default, the higher the interest rate demanded by lenders. If the central government is at risk of defaulting on its debt, interest rates rise for everybody. This additional interest rate is referred to as a default premium.

Foreign interest rates and the exchange rate

Because Canada has an open economy, investors are free to move their money between Canada and other countries. Therefore, foreign interest rates and financial conditions can also influence Canadian interest rates. For example, a rise in the U.S. interest rate increases returns on U.S. investments. Investors holding Canadian dollars wishing to invest in the United States must sell their Canadian dollars to purchase U.S. dollar-denominated securities. This activity increases the supply of Canadian dollars on the foreign exchange market and places downward pressure on the value of the Canadian dollar. If the Bank of Canada decides to slow or reduce this fall in value, it can intervene and raise short-term interest rates, even if underlying conditions in Canada are unchanged. This measure encourages investors to continue holding Canadian investments rather than switch to U.S. dollar-denominated securities.

Central banks credibility Central banks of different countries (including the Bank of Canada) exercise their influence on the economy by raising and lowering short-term interest rates.

Inflation When the inflation rate is expected to rise, lenders charge higher interest rates to compensate for the erosion of the money's purchasing power over the duration of the loan. One of the Bank of Canada's main responsibilities is to keep inflation low and stable. When commitment to low inflation has been credible and long-established, interest rates drop to compensate for the risk of rising inflation.

How Interest Rates Affect the Economy

Higher interest rates have a negative effect on growth prospects. Conversely, lower interest rates can provide a positive environment for economic growth.

Higher interest rates tend to affect the economy in the following ways:

They reduce business investment Any investment should earn a greater return than the cost of the funds used to make the investment. Higher interest rates raise the cost of capital for investments and reduce the possibility of profitable investments. Therefore, businesses are less likely to invest.

They encourage saving By increasing the cost of borrowing, higher interest rates discourage consumers from buying on credit, especially high-priced items such as houses, cars, and major furniture articles. Instead of choosing to borrow and pay off debt, they are content to put their money in savings.

They reduce consumption Higher interest rates increase the portion of household income that is needed to service debt, such as mortgage payments, thereby reducing the income available to spend on other items. This effect is offset somewhat by the higher interest income earned by savers.

Expectations and Interest Rates

Investment decisions are forward-looking because any decision to purchase a security is based on an expectation about its future return. Increased optimism in the market can generate a rise in stock prices, whereas pessimism can stall economic growth, and thus decrease share prices. Government economic policies also have an impact on people's expectations. For example, the Bank of Canada makes a considerable effort to maintain credibility in its commitment to lower the inflation rate.

The role of expected inflation is particularly important in determining the level of **nominal interest rates**. As we discussed earlier, the difference between nominal GDP and real GDP is the effect of inflation. The concept here is the same. The nominal interest rate is one where the effect of inflation has not been removed. The rate charged by a bank on a loan is the nominal interest rate, as is the quoted rate on an investment such as a guaranteed investment certificate or Treasury bill. Other things being equal, the higher the rate of inflation, the higher the nominal interest rate. In contrast, a good estimate of the **real interest rate** is the nominal interest rate minus the expected inflation rate.

EXAMPLE

Assume that you need to earn a real rate of return of 6% from your investments to fund your retirement goals. If inflation is expected to be 3%, you will only go ahead with your investment plans if you can earn a nominal rate of return of 9% (6% + 3%).

Dive Deeper

If you want to learn more about the real interest rate, search online for the Fisher Equation. Subtracting the inflation rate from the nominal rate provides a rough approximation of the real interest rate, and is a good estimation for the purposes of this course. The Fisher Equation provides a more complex and precise formula.

NEGATIVE INTEREST RATES

A **negative interest rate** occurs when the interest rate charged on borrowed funds is less than zero. In a negative interest rate environment, banks may charge their customers for keeping deposits in their accounts or a bank may pay a customer to take a loan. The latter seems almost too good to be true since under negative interest rates, the borrower does not have to make any interim interest payments over the term of the loan (only makes periodic payments related to principal amortization), and is only required to repay a discounted amount of the total original loan at maturity.

A negative interest rate is an unusual scenario, most likely to occur when monetary policy has already moved interest rates to zero or near zero, but further economic stimulus is required. When a central bank pushes interest rates into negative territory, thereby charging commercial banks to store their deposits with the central bank, the commercial banks have an incentive to lend more money, which in turn may stimulate economic growth.

Negative Interest Rates in the U.S. and Canada

Prior to 2020, negative interest rates prevailed mostly in some EU countries and in Japan. The U.S. appeared immune to negative interest rates up until aggressive monetary and fiscal policy programs were launched in response to the potential debilitating effects of the COVID-19 pandemic on the U.S. economy, in general, and U.S. unemployment levels, in particular.

However, on March 25, 2020, history was made in the U.S. when both the one- and three-month U.S. Treasury bills traded at negative yields for the first time.

As of May 2020, negative interest rates in the U.S. had not appeared again. In Canada, none of the Bank of Canada's administered rates had reached negative territory. Due to various fundamental factors, Canadian interest rates are normally higher than their U.S. equivalents. This provides a buffer if (or when) negative interest rates appear in Canada. Of course, there is always the risk that U.S. government bond market yields could move into negative territory. Depending on the size and extent of this move, Canada would also end up with negative interest rates, which would start with Treasury bills and possibly extend to short- and mid-term government bonds.

The Impact of Inflation

6 | Describe inflation and the impact it has on the economy.

Prices for goods and services can rise, fall, or remain unchanged, depending on the conditions in the market. Inflation is a sustained trend of rising prices on goods and services across the economy over a period. (In contrast, deflation is a general decrease in prices across the economy.)

A one-time jump in prices caused by an increase in the price of oil or by the introduction of a new sales tax, for example, is not true inflation. The true definition of inflation requires that prices continue to increase. Likewise, a rise in the price of one product is not in itself inflation; it may merely reflect the increased scarcity of that product.

Inflation occurs when prices follow a sustained rising pattern. As prices rise, money begins to lose its value, and a larger amount of money is needed to buy the same amount of goods and services.

EXAMPLE

Last year, you estimated that you would need $3,000 to live on each month. However, with increasing inflation, you are now finding that you need $3,200 per month to buy the same things that once cost you $3,000. Unfortunately, if your income does not increase at the same rate, your standard of living will soon deteriorate.

Inflation is an important economic indicator for securities markets because it is the rate at which the real value of an investment is eroded.

EXAMPLE

Assume that you have decided to invest $100,000 today for one year, on which you will receive a 7% return. However, the inflation rate is expected to be 3% over the course of the year, so your real rate of return will only be 4%.

Did You Know?

The Nature of Money

Money can be defined as any object that is accepted as payment for goods and services and that can be used to settle debts. Its function as a *medium of exchange* is essential. Without money, goods and services would need to be exchanged with other goods and services, in a form of the barter system.

Money acts as a *unit of account*, allowing us to determine the exact price of a good or service.

Money also represents a *store of value*. It does not have an expiration date. Consumers can decide to save it for use in the future. The more stable the value of money, the better it can act as a store of value.

Measuring Inflation

The inflation rate is the percentage of change in the average level of prices over a given period. The **Consumer Price Index** (CPI) is a widely used measure of inflation. The CPI monitors how the average price of a basket of goods and services, purchased by a typical Canadian household, changes from month to month or year to year.

When calculating CPI, prices are measured against a base year. Currently, the base year used in Canada is 2002, which is given a value of 100. At the end of December 2020, the total CPI was 138.2, which indicates that the basket of goods in that year cost 38.2% more than it did in 2002.

The following equation uses CPI to calculate the inflation rate:

$$\text{Inflation Rate} = \frac{\text{CPI Current Period} - \text{CPI Previous Period}}{\text{CPI Previous Period}} \times 100$$

EXAMPLE

Total CPI in March 2021 was 139.3. Total CPI in March 2022 was 148.2. In such a scenario, the inflation rate for that time period would be calculated as follows:

$$\text{Inflation Rate} = \frac{148.2 - 139.3}{139.3} = 0.063890 \times 100 = 6.39\%$$

Did You Know?

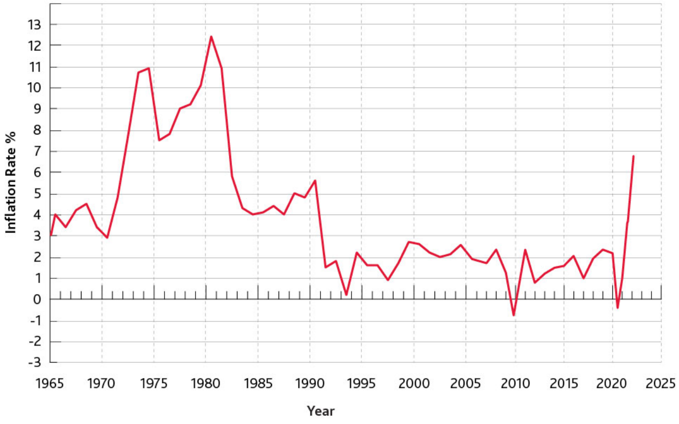
Statistics Canada currently monitors the retail price of a fictional basket of goods that comprises 600 different goods and services. Each item in the basket is weighted to reflect typical consumer spending. In this way, the CPI represents a measure of the average of the prices paid for this basket of goods and services. Statistics Canada has the difficult task of creating a fictional basket of goods and services that is representative of the typical Canadian household. Its goal is to make the relative importance of the items included in the CPI basket the same as that of an average Canadian household.

However, it is almost impossible to construct a basket that is representative of the needs of all consumers. For example, the spending patterns of a family with young children are not the same as the spending patterns of a retired couple.

In recent history, Canada's inflation rate reached a high of 12.2% in 1981 and fell as low as –0.9% in July 2009. The rate declined dramatically in both the early 1980s and 1990s based on monetary policy actions taken by the Bank of Canada. The inflation rate also dropped to a negative value of -0.2% in April 2020 and -0.4% in June 2020 as a result of the effects of the coronavirus pandemic.

Figure 4.6 shows the annual inflation rate in Canada dating back to the 1960s.

Figure 4.6 | The Annual Inflation Rate in Canada



Source: Bank of Canada

THE COSTS OF INFLATION

Inflation imposes many costs on the economy for the following reasons:

- It can erode the standard of living of Canadians, particularly of people on a fixed income, for example, retired individuals who rely on a monthly government pension. Canadians who are able to increase their income in response to inflation, either through increased wages or changes to their investment strategy, are less affected.
- It reduces the real value of investments, such as fixed-rate loans, because the loans must be paid back in dollars that buy less. A borrower whose income rises with inflation will not be affected. However, lenders are likely to demand a higher interest rate on the money they lend during inflationary times.
- It distorts the price signals sent to market participants. As we discussed earlier, prices are set by supply and demand. When inflation is high, it is difficult to determine whether a price increase is simply inflationary or a genuine relative price that reflects a change in supply or demand.
- Accelerating inflation usually brings about rising interest rates and a recession. Therefore, high-inflation economies usually experience more severe expansions and contractions than low-inflation economies.

Initiatives by the government to lower inflation often result in higher interest rates and higher unemployment. Both changes have a negative impact on economic growth. We explore this topic in detail in the section on monetary policy in Chapter 5.

The Causes of Inflation

An important determinant of inflation is the balance between supply and demand conditions in the economy. If demand for all goods and services is higher than what the economy can produce, prices will increase as consumers compete for too few goods. This typically occurs as we move from an expansion toward the peak phase of the business cycle. In such cases, output expands and consumer income rises, which leads to strong consumer demand for goods and services. If businesses have trouble meeting this higher demand, prices begin to rise. In this way, higher and continued consumer demand pushes inflation higher. This state of affairs is called **demand-pull inflation**.

Inflation can also rise or fall due to shocks from the supply side of the economy—that is, when the costs of production change. When faced with higher costs of production from higher wages or increases in the price of raw materials, businesses respond by raising prices or producing fewer products. The higher costs push inflation higher. This state of affairs is called **cost-push inflation**.

Deflation and Disinflation

Although costs are normally associated with rising inflation, a falling rate of inflation can also have a negative impact on the economy. **Disinflation** is a decline in the rate at which prices rise (i.e., a decrease in the rate of inflation). Prices are still rising, but at a slower rate.

Deflation is a sustained fall in prices, where the annual change in the CPI is negative year after year. Deflation is simply the opposite of inflation. Falling prices are generally preferred over rising prices. Goods and services become cheaper, and our income has more buying power than it used to. Although this is true in the short term, there are negative consequences of deflation.

Costs of Deflation and Disinflation

In general, there is an inverse relationship between inflation and unemployment. When unemployment is low, inflation tends to be high; when unemployment is high, inflation tends to be low. This relationship is described by the **Phillips curve**. According to this theory, we can make the following conclusions:

- Lower unemployment is achieved in the short run by increasing inflation at a faster rate.
- Lower inflation is achieved at the cost of possibly increased unemployment and slower economic growth.

Some economists believe that the impact of sustained falling prices eventually leads to a decline in corporate profits. As prices continue to fall, businesses must sell their products at lower and lower prices. Businesses cut back on production costs and wage rates, and if conditions worsen, lay off workers. For the economy as a whole, unemployment rises, economic growth slows, and consumers shift their focus from spending to saving. Ultimately, declining company profits negatively impact stock prices.

Other Inflationary Environments

Although inflation, deflation, and disinflation represent most inflation scenarios, historically, two additional environments come under consideration when required. These are defined in Table 4.5.

Table 4.5 | Stagflation and Hyperinflation

Stagflation	• High inflation rate • Slowing rate of economic growth
Hyperinflation	• Extremely high inflation rate (defined as greater than 50% per month) • Occurs infrequently • Generally limited to underdeveloped economies

Many economists view the 1972 to 1982 period as a stagflation environment for most western economies. Stagflation is primarily attributed in this case to the combination of high inflation brought on by the two Arab oil embargoes in the 1970s coupled with the sub-par economic growth that resulted. The potential for stagflation in western economies has become a greater concern recently. Some analysts fear that the aggressive fiscal and monetary policies applied during the Covid-19 crisis will result in high inflation accompanied by slower economic growth.

Hyperinflation is frequently associated with the Weimar Republic in the early 1920s. However, a more recent example is Venezuela, where the country's central bank estimated that the inflation rate exceeded 53,000,000% between 2016 and 2019.

Interest Rates and Inflation

How do interest rates and inflation affect the economy? *Complete the online learning activity to assess your knowledge.*

International Finance and Trade

7 | Analyze how trade between nations takes place through the balance of payments and via the exchange rate.

International finance refers to Canada’s interaction with the rest of the world, including trade, investment, capital flows, and **exchange rates**. Canada is dependent on trade; exports of goods and services account for about a third of our GDP. Consequently, the economic performance of our trading partners directly affects Canada’s economy. When the economies of our trading partners are expanding, Canada’s economy also benefits. As trading partners increase their spending on goods, Canadian companies generally export more goods abroad. Conversely, Canadian exports fall when economic growth in our trading partners declines.

This relationship holds true within Canada as well. When Canada experiences growth and income rises, we spend more on goods and services, both domestic and imported.

The Balance of Payments

The **balance of payments** is a detailed statement of a country’s economic transactions with the rest of the world over a given period (typically a quarter or a year). The balance of payments has two main components: the *current account*, and the *capital and financial account*.

Current account

This account records the import and export of goods and services between Canadians and foreigners, as well as net transfers such as for foreign aid. The current account is sometimes called the trade account in the financial press.

Capital and financial account

This account tracks financial flows between Canadians and foreigners, related to investments by foreigners in Canada and investments by Canadians abroad.

Balance of payments transactions incur a supply, or demand, of foreign currency and a corresponding supply, or demand, of Canadian currency. Current account outflows might be used to buy foreign goods or to pay interest on debt held by foreigners thus creating a demand for foreign currency to make those payments. Canadian dollars are offered in exchange for this foreign currency unless there is a corresponding demand for Canadian dollars.

Think of the current account as what we spend on things and the capital and financial account as what we use to finance this spending. During a given year, if Canada buys more goods and services from abroad than it sells, it will run a current account deficit for the year. It will need to sell more assets to finance the spending, which means running a capital and financial account surplus. Alternatively, it will go into debt.

As an analogy, when you spend more than you earn, you make up the difference by either borrowing money or selling something of value, and then using the proceeds to pay off the debt.

The Exchange Rate

Buying foreign goods or investing in a foreign country requires the use of another currency to complete the transactions. Likewise, when foreign buyers purchase Canadian goods or invest in Canadian assets, they need Canadian dollars. The foreign exchange market includes all the places in which one nation’s currency is exchanged for another, at a specific exchange rate. The exchange rate is the current price of one currency in terms of another.

For example, at a given time, it might cost $0.80 U.S. dollars to buy one Canadian dollar, while at the same time it would cost $1.25 Canadian dollars to buy one U.S. dollar (1/0.80).

THE EXCHANGE RATE AND THE CANADIAN DOLLAR

The value of the Canadian dollar relative to other currencies influences the economy in a number of ways. The most important influence is through trade. A higher Canadian dollar relative to our trading partners makes Canadian exports more expensive in foreign markets and imports cheaper in Canada. When the Canadian dollar rises in value relative to a foreign currency, the dollar is said to have *appreciated* in value against that currency; conversely, when the Canadian dollar falls in value relative to a foreign currency, the dollar has *depreciated* in value against that currency.

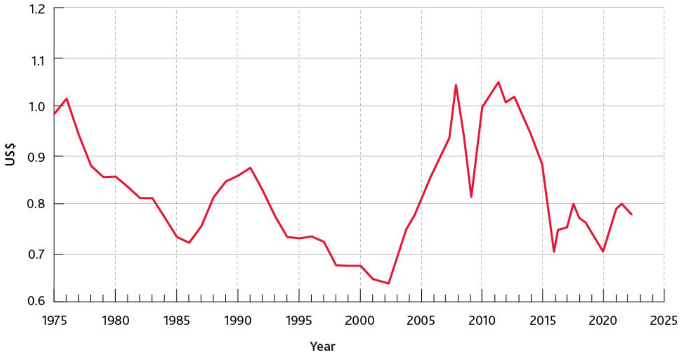
EXAMPLE

Let's assume that a machine made in Canada sells for $1,000 in Canada. With the exchange rate of the Canadian dollar at $0.80 U.S., the machine will sell for $800 in the United States. If a similar product sells for $850 in the United States, the Canadian manufacturer benefits because, at the current exchange rate, the machine will sell for a lower price than its competitor in the U.S. market. However, let's assume that the exchange rate appreciates in value to US$0.90. The machine will now sell for US$900, making the Canadian manufacturer less competitive in the U.S. market. Sales, and corporate profitability, would likely then decrease.

Figure 4.7 shows the exchange rate between Canada and the United States from 1975 to 2020. The figure shows an almost consistent depreciation of the Canadian dollar against the U.S. dollar from about 1976 to 2002, other than a brief period in the late 1980s when it appreciated for several years.

This downward trend reversed beginning in early 2003, as the currency rose steadily against the U.S. dollar. In fact, the Canadian dollar traded above par (US$1.00) in 2007 for the first time since the mid-1970s. In recent years, however, the Canadian dollar has undergone a substantial depreciation against the U.S. dollar.

Figure 4.7 | How the Canadian Dollar Has Traded Against the U.S. Dollar



Source: Bank of Canada

Determinants of Exchange Rates

Many economists and analysts, including those employed at the Bank of Canada, pay close attention to the currency exchange rate to predict its direction. Some countries fix the value of their currency so that it is constant in comparison to their major trading partner. Canada, however, allows its currency to float freely. Generally, the Bank of Canada does not intervene to support the Canadian dollar, but it might choose to intervene to slow down and stabilize the rate of change in the exchange rate.

The following factors are widely accepted as influencing the exchange rate, although the weight ascribed to each factor is widely debated:

Commodities One of the strongest influences on the Canadian exchange rate is the price level of commodities. Canada is heavily dependent on the export of natural resources to other countries, including commodities such as lumber, base metals, crude oil, and wheat. Countries around the world that buy Canadian products need Canadian dollars to finance their purchases. As the demand for commodities increases, the demand for Canadian dollars also rises.

Inflation Over time, the currencies of countries with consistently lower inflation rates rise, reflecting their increased purchasing power relative to other currencies.

Interest rates Central banks can influence the value of their exchange rate by raising and lowering short-term nominal interest rates. Higher domestic interest rates increase the return to lenders relative to other countries. This attracts capital and lifts the exchange rate because the foreign investor must buy Canadian dollars to invest. Lower interest rates have the opposite effect. However, the impact of higher interest rates is reduced if domestic inflation also is much higher or if other factors are driving the currency down.

Trade When we export goods and services, other countries must buy Canadian dollars to pay for the goods, which increases the demand for, and value of, Canadian dollars. When importing goods we must sell Canadian dollars and buy the currency of the country we are importing from. This increases the supply of Canadian dollars, which causes downward pressure on the value of the currency.

Economic performance A country with a strong growing economy may be more attractive to foreign investors because it improves investment returns and attracts investment capital.

Public debts and deficits Countries with large public-sector debts and deficits are less attractive to foreign investors.

Political stability Investors seldom like to invest in countries with unstable or disreputable governments, or those at risk of disintegrating politically. Therefore, political turmoil in a country can cause a loss of confidence in its currency and what is known as a *flight to quality*, a rush to exchange the country's currency to that of more politically stable countries.

KEY TERMS & DEFINITIONS

Can you read some definitions and identify the key terms from this chapter that match? *Complete the online learning activity to assess your knowledge.*

Summary

In this chapter, we discussed the following key aspects of economics:

- The three main decision makers in the economy are consumers, businesses, and governments. Demand and supply are the forces that determine market equilibrium.
- GDP is the market value of all finished goods and services produced within a country within a given time. GDP is measured using three approaches:

  - The expenditure approach, where GDP is the sum of personal consumption, investment, government spending, and net exports
  - The income approach, where GDP is the total income earned through the production of all goods and services
  - The production approach, where GDP is the sum of all output less the value of all goods and services purchased to produce the output
- The five phases in a typical business cycle are recovery, expansion, peak, contraction, and trough.
- Leading, lagging, and coincident economic indicators are used to analyze the current state of the economy. Improvements in long-term economic growth are attributed to improvements in productivity.
- The participation rate is the share of the working-age population that is in the labour force. The unemployment rate represents the share of the labour force that is unemployed and actively looking for work. The four types of unemployment are cyclical, frictional, seasonal, and structural.
- Interest rates are influenced by demand for and supply of capital, default risk, central bank operations, foreign interest rates, and inflation. Higher interest rates lead to slower economic growth, whereas lower rates encourage growth.
- Inflation is a sustained trend of rising prices measured on an economy-wide basis. It is measured using the CPI. Rising inflation reduces the real value of investments; it typically brings about rising interest rates and slower economic growth.
- A country’s balance of payments is a detailed statement of its economic transaction with the rest of the world. The exchange rate is the price of one currency in terms of another, which is determined by inflation and interest rate differentials, economic performance, public debt and deficits, and political stability.

Review Questions

Now that you have completed this chapter, you should be ready to answer the Chapter 4 Review Questions.

Frequently Asked Questions

If you have any questions about this chapter, you may find answers in the online Chapter 4 FAQs.

Economic Policy

Chapter Overview

In this chapter, you will learn about economic policy, both fiscal and monetary, and the impact of government policy decisions on the investment landscape. In this context, you will learn about the roles and functions of the Bank of Canada and the challenges that governments face in setting their economic policies.

learning objectives	**content areas**
1 | Describe the components of fiscal pc and their impact on economic performance	**Fiscal Policy**
2 | Explain the roles an functions of the Bank of Canada	**The Bank of Canada**
3 | Analyze how the Ba Canada implements an conducts monetary policy	**Monetary Policy**
4 | Summarize the challenges government face when implementin fiscal and monetary policy.	**The Challenges of Government Policy**

Key Terms

Key terms are defined in the Glossary and appear in **bold** text in the chapter.

balanced budget

Bank Rate

basis points

budget deficit

budget surplus

drawdown

fiscal agent

fiscal policy

Lynx

monetary policy

national debt

overnight rate

overnight repo

overnight reverse repo

Payments Canada

redeposit

Introduction

Once a year, typically in February, the federal minister of finance announces the government's budgetary requirements. The statement serves as the government's annual fiscal policy score card of spending and taxation measures. Not far from Parliament Hill, the Bank of Canada uses monetary policy to maintain balance in the economy. The government also exerts influence over interest rates and the exchange rate toward that goal. The government operates largely independently from the Bank of Canada. However, they both share the goal of creating conditions for long-term, sustained economic growth.

This chapter explores fiscal and monetary policy, particularly from the standpoint of making investment decisions. For example, if the economy is moving through expansion into the peak phase of the business cycle, what monetary policy initiative is the Bank of Canada likely to consider? If the economy has been stalled in recession and unemployment continues to rise, what fiscal policy initiative is the federal government likely to consider? Given your understanding of their likely course of action in each situation, what investments or strategies would you pursue?

Economic policy and the policy decisions made by the federal government and the Bank of Canada are key factors in making investment decisions. Therefore, it is important that you understand the difference between fiscal and monetary policy, and that you can explain how policy actions affect the financial markets. Your knowledge in this area will help you make investment decisions based on current economic conditions, and on the likely impact that fiscal and monetary policy decisions may have on those investments.

Fiscal Policy

1 | Describe the components of fiscal policy and their impact on economic performance.

Fiscal policy informs government decisions around the use of its spending and taxation powers. A government's fiscal policy influences economic activity, employment levels, and sustained long-term growth. Most fiscal policy is a balancing act between taxes and spending. There are differing views about the effectiveness of fiscal policy.

Both federal and provincial governments implement certain elements of fiscal policy. The federal government is responsible for services including national defence, employment insurance, pension income for seniors and the disabled, veterans' affairs, foreign affairs, and indigenous and northern affairs. Provincial governments are responsible for other services including health care, education, securities regulation, and various social services. However, both the federal and provincial governments share some level of responsibility for those areas. A large segment of federal spending consists of transfer payments to the provincial governments to help pay for such shared responsibilities.

The Federal Budget

The government's revenue comes primarily from different forms of taxation. The government's budget balance is equal to that revenue less total spending. The federal budget contains projected spending, revenue, surplus or deficit, and debt for the coming fiscal year, which runs from April 1 to March 31, plus at least one subsequent year.

The government's proposed annual budget has one of the following three possible positions:

Proposed Budget Amount	Budget Position
Revenue > Spending	**Budget surplus**
Revenue < Spending	**Budget deficit**
Revenue = Spending	**Balanced budget**

The **national debt** consists of accumulated past deficits minus accumulated past surpluses in the federal budget. When the government runs a deficit, it must borrow from the capital markets to finance the national debt.

The amount of the surplus or deficit each year, along with the current national debt, are the most important numbers in the budget. These amounts indicate the extent to which the government will be borrowing in the coming year and the impact it will have on the capital markets.

Governments finance deficits by issuing debt instruments such as bonds and Treasury bills in the capital markets. Some of the national debt may also mature in that year and must therefore be refinanced. Government borrowings comprise these two amounts: refinanced debt and new debt.

Capital markets have a finite amount of capital. Therefore, when a government borrows significantly from the capital markets, less capital remains for businesses to borrow. This effect, referred to as *crowding out*, can have a negative impact on the economy. The supply of capital may not be sufficient to meet the needs of the business community, and like any other market, when supply is less than demand, prices go up. In other words, interest rates rise, and it costs more to borrow money.

How Fiscal Policy Affects the Economy

As we discussed in the previous chapter, gross domestic product (GDP) largely comprises three major components: government spending, consumer spending, and business spending and investment. Fiscal policy generally targets all three components. The government's key fiscal policy tools are *spending* and *taxation*.

When the government announces a new budget, analysts scrutinize it closely. The budget tells us what the government plans to do with respect to spending and taxation. It also provides information about how our tax dollars are going to be used. The budget also reveals what the government thinks is going to happen in the economy within the next couple of years, which is an important indicator.

FOR INFORMATION ONLY

Key Economic Theories

There exists a variety of theories to explain how the economy works and to guide economic policy. Two of the more popular theories are Keynesian economics and the monetarist theory.

Keynesian economics advocates direct government intervention as a means of achieving economic growth and stability. You can see Keynesian economics in action in the government’s use of fiscal policy to stabilize the economy. When spending is insufficient and a recession looms, the government pursues a policy of increased spending and lower taxes. During an economic boom, or when higher spending threatens to create inflation, government policy changes in favour of lower spending and higher taxes.

For example, during a recession, the Keynesian approach is to raise consumer income by increasing government spending or lowering taxes. With more money available, consumers increase their spending on goods and services. To meet higher consumer demand for their products, businesses expand production and hire more workers. The lower unemployment rate leads to a further increase in consumer income and spending until policymakers sense that spending is rising too quickly. At that point, economic policy shifts. The government then opts for reducing spending and raising taxes.

Monetarist theorists argue that governments should not use fiscal policy to influence the economy. They claim that changes to the money supply cause fluctuations in the economy. Therefore, the money supply and interest rates should be used to control economic instability and inflation. As the name suggests, monetary policy is the key economic tool that monetarist theorists propose should be used.

Monetarists believe that the central bank should expand the money supply at a rate equal to the economy’s long-run growth rate, such as 2% to 3% per year, for example. According to this view, the main policy goal is to control inflation, which creates a foundation for the economy to grow at its optimal rate. We look at monetary policy in the next section.

Spending

Just as companies spend money to run their business, the federal government spends money to run the country. The government pays for utilities, communications, salaries, and supplies, much like companies do. The government must also pay for programs it sponsors and investment in infrastructure projects. Governments at all levels can increase spending to stimulate the economy, or they can reduce spending when inflation is a concern.

When the government provides funding for new infrastructure, the government spending component of the GDP obviously increases, but that is not all. To build a new highway, for example, workers must be hired and materials must be bought. The newly employed workers have more money to spend, which may increase the consumer spending component of GDP. As consumers spend more, business revenues also increase. Some companies may expand their operations to meet increased demand for their products. Therefore, the business spending component of the GDP may also increase. In this way, government spending on infrastructure can have a stimulative effect on the whole economy.

Taxation

Several types of taxes provide the revenue for government spending. Some taxes are imposed on businesses; others are imposed on consumers. If the government wants to stimulate the economy, it can lower personal taxes, in which case consumers have more money to spend. It can also lower business taxes, in which case businesses have more money to spend and invest. And when businesses expand operations and hire more workers, this can lead to a drop in the unemployment rate.

As with spending, the government may increase taxation to lower inflation, making it more difficult for consumers and businesses to spend.

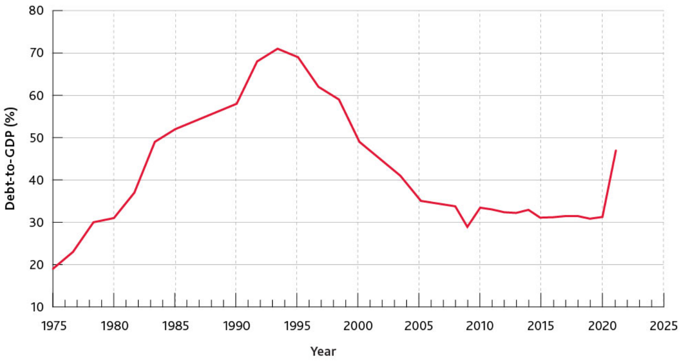
FOR INFORMATION ONLY

Persistent deficits emerged in Canada during the 1980s, after which the annual deficit grew considerably and a vicious cycle emerged. Higher deficits led to increased borrowing, which led to a larger national debt and larger interest payments to service the debt. These larger interest payments further led to increasingly large deficits and debts. In fact, it was not until 1997 that the federal government managed to run a surplus.

The federal debt in Canada, as a percentage of GDP, has fallen significantly over the past 20 years. The debt-to-GDP ratio is regarded as a sound measure of a country's overall debt burden. The measure is relevant because the debt is measured against the government's, and taxpayers', ability to finance it.

Figure 5.1 shows the annual federal government debt as a percentage of GDP for Canada from 1975 to the end of the 2020–21 fiscal year. As a share of GDP, federal debt sits at 47.6%, down from its peak of 68.4% in 1995–96. Note that the recent jump in debt as a percentage of GDP resulted from additional government spending because of the coronavirus pandemic.

Figure 5.1 | Annual Federal Government Debt as a Percentage of Gross Domestic Product



Source: Annual Financial Report of the Government of Canada, Fiscal Year 2020–2.

Fiscal Policy

Can you define the fiscal policymaking process and identify the decision makers? Can you explain the impact of fiscal policy on the economy? *Complete the online learning activity to assess your knowledge*.

The Bank of Canada

2 | Explain the roles and functions of the

Bank of Canada.

The Bank of Canada (the Bank) is the nation's central bank. It was founded in 1934 and began operations in 1935 as a privately-owned corporation. By 1938, ownership passed to the Government of Canada. The Governor and Deputy Governor are appointed for a term of seven years by the Board of Directors. The Board may also appoint one or more additional Deputy Governors. The Governor acts as both the Chief Executive Officer of the Bank and the chair of the Bank's Board of Directors. The Board of Directors is composed of the Governor, Senior Deputy Governor, 12 independent directors, and the Deputy Minister of Finance. Though directors may provide insight into prevailing economic conditions, they neither formulate nor implement monetary policy. Responsibility for the affairs of the Bank of Canada rests with a Governing Council composed of the Governor, the Senior Deputy Governor, and any additional Deputy Governors appointed by the Board.

Role and Functions of the Bank of Canada

The main role of the Bank is to promote the economic and financial welfare of Canada. To do so, the Bank acts to stabilize the Canadian economy by using monetary policy.

The Bank administers **monetary policy** independently, without day-to-day intervention by the government. However, policy itself is the ultimate responsibility of the elected government.

The Bank has four main areas of responsibility:

1. Monetary policy

   Monetary policy is designed to preserve the value of the Canadian dollar by keeping inflation low, stable, and predictable. The Bank makes use of inflation control targets to influence interest rates and a flexible exchange rate when conducting monetary policy.

2. The Canadian financial system

   The Bank works with a variety of agencies and market participants in Canada and abroad to promote and maintain the efficient operation of the financial system. The Bank does this by overseeing the main clearing and settlement systems, working with domestic and international regulatory bodies, providing liquidity to the financial markets, and giving advice to the federal government. In its role as the nation's central bank, the Bank is technically the ultimate source of liquidity in the financial system and is referred to as the *lender of last resort*.

3. Physical currency

   The Bank is responsible for designing, printing, and distributing Canadian bank notes.

4. Funds management

   The Bank is the fiscal agent for the Government of Canada. A **fiscal agent** is an institution appointed to advise in, and conduct, various financial matters of another. In the capacity of fiscal agent, the Bank has the following responsibilities:

   - It manages the government's accounts through which virtually almost all money collected and spent by the government flows.

- It manages the government’s foreign currency reserves, such as U.S. dollars, euros, gold, and silver.
- It manages the government’s federal debt, which consists mostly of Treasury bills and marketable bonds. The Bank keeps track of this debt by ensuring that interest payments are made, tracking who owns the debt, and ensuring that the debt is paid back or refinanced in a timely manner.
- It provides advice to the federal government regarding what debt can be issued, at what interest rate, and for what term, based on its assessment of the capital markets. The goal is to ensure stability of the capital markets.

Monetary Policy

3 | Analyze how the Bank of Canada implements and conducts monetary policy.

According to the Bank, the goal of monetary policy is to preserve the value of money in the economy by keeping inflation low, stable, and predictable. This goal helps to promote sustained economic growth and job creation. Since 1991, the Bank has acted to keep inflation between 1% and 3% by using inflation-control targets.

Did You Know?

Economic growth in the economy is important, but if that growth takes place too fast, the economy may experience inflation. Low or no growth can lead to unemployment, a stagnant economy, and a drop in the country’s standard of living.

Canada’s Monetary Policy Framework

The Bank’s key monetary policy tools for implementing monetary policy occur through the following means:

- Interest rate policy
- Open market operations

The methods to apply these tools are explained in detail below.

Target Overnight Rate

Setting an official interest rate is the most noticeable and most important monetary policy tool the Bank uses. The Bank conducts monetary policy primarily through changes to what it calls the target for the **overnight rate**. By changing its target, the Bank can signal a policy shift toward an easing or tightening of monetary conditions to meet its inflation-control targets.

The overnight rate is the interest rate set in the *overnight market*, a marketplace wherein major Canadian financial institutions lend each other money in the form of one-day loans (called *overnight loans*). Changes in the target for the overnight rate influence other short-term interest rates, for such things as consumer loans or mortgages.

The overnight rate operates within an operating band that is 50 **basis points** wide. A basis point equals 1/100th of a percentage point. Each day, the Bank targets the mid-point of the operating band as its key monetary policy objective. For example, if the operating band is 1.5% to 2.0%, then the target for the overnight rate is 1.75%.

Did You Know?

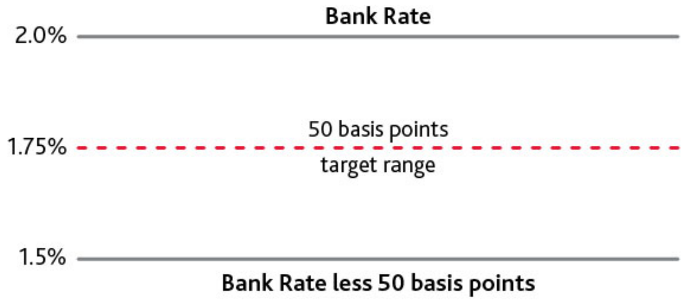
One basis point is equal to 1/100th of a percentage point. Therefore, 50 basis points are equal to half of a percentage point, or 0.5%, and 100 basis points are 1%.

Did You Know?

The **Bank Rate** is the rate of interest that the Bank charges on one-day loans to the chartered banks and other major financial institutions that are members of **Payments Canada**. The Bank Rate is the upper limit of the operating band. The Bank Rate and the operating band are adjusted simultaneously whenever the Bank changes the target for the overnight rate of interest.

Figure 5.2 shows the Bank's operating band under specific conditions.

Figure 5.2 | The Bank of Canada's Operating Band



The Bank announces whether or not it will change the target rate on eight pre-set fixed dates during the year. Changes to the rate send a strong message about the Bank's outlook to the financial community, whose members then adjust their interest rates accordingly.

EXAMPLE

If the Bank lowers the target rate from 1.0% to 0.75%, its goal is to ease monetary conditions, making it cheaper for consumers and businesses to borrow money, and thus encouraging them to borrow money and increase spending in the economy. If the Bank raises the target rate, its goal is to tighten monetary conditions, making it more expensive to borrow money, and thus encouraging consumers and businesses to save more and spend less.

Open Market Operations

The two main open market operations the Bank uses to conduct monetary policy are overnight repos and overnight reverse repos. Instead of letting the rates vary from day to day depending on conditions in the market, the Bank initiates these transactions as often as needed, to keep the overnight market trading within the operating band.

OVERNIGHT REPOS

Overnight repos are used by the Bank when it wants to push interest rates down. If the overnight rate is trading above the target rate, the Bank may believe that the higher rates will dampen economic activity. To combat this risk, the Bank intervenes with an overnight repo, offering to lend money at a lower rate.

An overnight repo generally works as follows:

1. The Bank offers to lend on an overnight basis, that is, with an agreement that the loan be paid back one business day later.
2. The Bank essentially *purchases* Treasury bills from another financial institution on an overnight basis.
3. To complete the lending, the financial institution *sells* Treasury bills to the Bank on an overnight basis.
4. The Bank's purchase of the Treasury bills gives the financial institution more money to lend out. This activity increases the money available in the financial system, causing the overnight rate to fall.
5. The next day, the transaction is reversed and the financial institution pays back the loan to the Bank.

EXAMPLE

The upper limit of the operating band is 2.0%, whereas overnight money is trending up and trading at 2.10%. The Bank enters into an overnight repo and offers to lend at 2.0%, the top of the operating band. This offer encourages financial institutions to borrow from the Bank at the lower rate, rather than from other institutions at the higher market rate of 2.10%. As a result, overnight rates remain within the operating band.

OVERNIGHT REVERSE REPO

Overnight reverse repos are used to increase the interest rate. If overnight money is trading below the target, the Bank may believe that inflationary pressures in the economy will rise because it becomes too inexpensive to borrow money. To combat this pressure, the Bank intervenes and offers to borrow at a higher rate. For example, if the lower limit of the operating band is 1.5%, while overnight money is trading at 1.25%, financial institutions would much prefer the Bank's rate.

An overnight reverse repo generally works as follows:

1. The Bank offers to borrow money by selling Treasury bills on an overnight basis.
2. The Bank essentially *sells* Treasury bills to other financial institutions.
3. To complete the deal, the financial institution buys Treasury bills from the Bank.
4. The transaction reduces the money available in the financial system because the financial institution must pay for the loan by drawing funds from its account. This action causes the overnight rate to rise. The next day, the transaction is reversed.

Did You Know?

Each day, billions of dollars flow through Canada's financial system to settle transactions between the major financial institutions. These transactions include cheques, wire transfers, direct deposits, pre-authorized debits, and bill payments. **Lynx** is Canada's high-value payment system that replaced the Large Value Transfer System in 2021. Lynx is an electronic wire system that facilitates the transfer of payments in Canadian dollars between financial institutions across

Canada. This system allows participating financial institutions to conduct large transactions with each other through an electronic wire system. Lynx also provides an important setting for conducting monetary policy. Throughout the day, financial institutions send payments back and forth to each other as part of their normal operations. At the end of each day, all of the transactions that occurred during the day are added up. At this point, some financial institutions must borrow funds, whereas others have funds left over.

For example, suppose that chartered bank ABC had $50 million in payments to other financial institutions and $40 million in receipts during the day. At the end of the day, it finds itself in a deficit position of $10 million for that day. Because participants in the Lynx high-value payment system are required to clear their balances with each other every day, chartered bank ABC will need to borrow $10 million in funds to cover that position. The bank will then need to borrow the funds from another participant at the current overnight rate.

Overall, Lynx helps to ensure that trading in the overnight market stays within the Bank's 50-basis-point operating target. Participants know that the Bank will always lend money at the upper limit of the band and borrow money at the lower limit. Therefore, it does not make sense for financial institutions in the system to borrow or lend outside of the target band.

DRAWDOWNS AND REDEPOSITS

Another strategy the Bank can use is to move money into our out of their chartered bank accounts. The federal government maintains accounts with the Bank and the chartered banks. Given its status as *lender of last resort*, the Bank can transfer funds from the government's account at the Bank to its account at the chartered banks. Conversely, the Bank can transfer funds from the government's account at the chartered banks to its account at the Bank. The Bank can use both strategies to influence short-term interest rates, either with a drawdown or a redeposit:

- A **drawdown** is the transfer of deposits to the Bank from the chartered banks, which effectively drains the supply of available cash balances from the banking system. Financial institutions consequently have less money available to lend to consumers and businesses, which causes interest rates to increase. Consumers and businesses are less willing to borrow at these higher rates.
- A **redeposit** is a transfer of funds from the Bank to the chartered banks. This increase in deposits and reserves increases the money available in the financial system, which in turn decreases interest rates. Consumers and businesses are then more willing to borrow, and banks have more money to lend.

Monetary Policy

Can you explain how and why the Bank of Canada sets monetary policy? *Complete the online learning activity to assess your knowledge*.

The Challenges of Government Policy

4 | Summarize the challenges governments face when implementing fiscal and monetary policy.

Fiscal and monetary policies may seem relatively straightforward. However, governments attempting to implement these policies can face the following challenges:

Timing lags

In economics, there are delays between recognizing an economic problem, deciding what policy action to take to solve the problem, implementing the policy, and ultimately seeing the benefit of the policy in action. These timing lags make monetary policy decisions more difficult and policy actions less effective. For example, according to the Bank, such actions can take more than 18 months for the full effect on inflation to work its way through the economy.

Fiscal policy actions face similar delays, depending on parliament's legislative cycle and the government's budget position. For example, the impact of lower consumer and corporate taxes is felt much more quickly than the impact of major infrastructure spending. A project to spend billions on a major new transit project could take many years to plan and implement.

Political considerations

Politicians typically work toward re-election, which creates what is known as a *political business cycle*. While campaigning, they may advocate lowering taxes or spending on programs and infrastructure in their own riding. However, once they are elected, the national economic reality may call for lower spending.

Future expectations

Expectations can cause a policy initiative to fail. For example, the government may announce that it will cut personal tax rates to stimulate the economy. However, if the consensus is that the government is doing so only because it is near the end of its mandate, or if the tax cut is widely expected to be soon reversed, consumers may see it as a short-term action. Therefore, consumers may choose to save the tax cut instead of increasing spending, and the policy initiative fails.

Coordination of federal, provincial, and municipal policies

Canada is a large country, with diverse populations and needs. For policy initiatives to work, they must be implemented nationally. However, not all of Canada may need the same intervention.

For example, British Columbia may be experiencing increased inflation while Nova Scotia suffers from a recession. If the government chooses to lower interest rates to stimulate the economy in Nova Scotia, the problem of inflation in British Columbia could worsen.

High federal debt

Several years of deficits can reduce the government's flexibility with respect to spending. The higher the government debt, the higher the interest payments that must be made. A government's plan to lower spending to fight inflation may fail if the interest payments are very high.

Impact of international economies

The economies of our major trading partners can have a significant impact on our economy. For example, Canada exports billions of dollars worth of goods to the United States. If the U.S. economy begins to suffer from a recession, exports to that country will decrease, causing a drop in Canada's GDP, and perhaps even triggering a recession in Canada. Conversely, Canada also imports billions of dollars worth of goods from the United States. If the U.S. economy is suffering from inflation, the goods we import from them will increase in price, and perhaps even cause inflation in Canada.

Table 5.1 summarizes the different methods used to apply fiscal and monetary policies.

Table 5.1 | Fiscal and Monetary Economic Policy

Economic Problem	**Fiscal Policy**	**Monetary Policy**
Unemployment and recession	• Increase government spending • Decrease taxes	Decrease interest rates Increase consumer spending and investment with expansionary policies.
High Inflation	• Decrease government spending • Increase taxes	Increase interest rates Reduce consumer spending and investment with contractionary policies.

Table 5.2 compares the advantages and disadvantages of fiscal and monetary policy.

Table 5.2 | Advantages and Disadvantages of Monetary and Fiscal Policy

	Monetary Policy	Fiscal Policy
Advantages	• The effect on the economy can be more immediate. • The initiative (e.g., lowered or higher interest rates) can be reversed once the objective is achieved. • It is independent of political considerations.	• Government spending can be targeted to specific regions. • Tax cuts and increased benefits are popular. • Consumers can more easily understand and experience the impact.
Disadvantages	• It can be difficult to target a specific region. • Lowering interest rates may not have an impact if the consumer doesn't feel confident enough to spend. • Higher interest rates at already very low levels may have no impact.	• Tax increases and government spending cuts are unpopular. • There are challenges in stopping a project once it has been implemented, even if the initiative is no longer necessary. • Higher government spending can raise debt levels and lead to a greater proportion of revenue going toward interest payments.

CASE SCENARIO

Can you answer Saira's questions about the Bank of Canada? *Complete the online learning activity to assess your knowledge.*

KEY TERMS & DEFINITIONS

Can you read some definitions and identify the key terms from this chapter that match? *Complete the online learning activity to assess your knowledge.*

Summary

In this chapter, we discussed the following key aspects of economic policy:

- Fiscal policy is the use of government spending and taxation to pursue full employment and sustained long-term growth.
- Governments pursue fiscal policy by spending more and taxing less when the economy is weak, and by spending less and taxing more when the economy is strong. In Canada, the federal budget is the key mechanism through which the government conducts fiscal policy.
- The Bank's role is to monitor, regulate, and control short-term interest rates and the external value of the Canadian dollar. The major functions of the Bank include issuing and removing bank notes, acting as fiscal agent and financial advisor for the federal government, and implementing monetary policy.
- The goal of monetary policy is to improve the performance of the economy by regulating credit. The Bank achieves this goal through its influence over short-term interest rates and with the use of the following tools:
  - The target for the overnight rate of interest
  - Overnight repos and overnight reverse repos
  - Drawdowns and redeposits
- The federal government faces the following issues and challenges regarding its policy decisions:
  - An interventionist policy may be ineffective if the economy is too slow to react.
  - Some participants oppose intervention in the belief that the economy will make its way quickly to a natural equilibrium.

    - The national debt takes up a huge part of the resources available for government expenditure.
    - Fiscal and monetary policies are often unsynchronized, which increases their cost to taxpayers.

Review Questions

Now that you have completed this chapter, you should be ready to answer the Chapter 5 Review Questions.

Frequently Asked Questions

If you have any questions about this chapter, you may find answers in the online Chapter 5 FAQs.

SECTION 3

INVESTMENT PRODUCTS

Fixed-Income Securities: Features and Types

Fixed-Income Securities: Pricing and Trading

Equity Securities: Common and Preferred Shares

Equity Securities: Equity Transactions

Derivatives

Fixed-Income Securities: Features and Types

Chapter Overview

In this chapter, you will learn about the fixed-income marketplace and the rationale for using fixed-income securities. You will become familiar with the terminology used to discuss bonds, debentures, and other types of fixed-income securities, and you will learn to distinguish among the different types used by governments and corporations. Finally, you will learn how to read bond quotes and ratings.

learning objectives	content areas
1 | Describe the fixed-income marketplace an the rationale for issuing debt securities	**The Fixed-Income Marketplace**
2 | Define the terminolo main features, and characteristics of the various fixed-income securities.	**The Basic Features and Terminology of Fixed-Income Securities**
3 | Summarize the featu and characteristics of Government of Canada securities	**Government of Canada Securities**
4 | Summarize the featu and characteristics of provincial and municipa government securities	**Provincial and Municipal Government Securities**
5 | Summarize the featu and characteristics of corporate bonds	**Types of Corporate Bonds**
6 | Summarize the featu and characteristics of o fixed-income securities	**Other Fixed-Income Securities**
7 | Interpret bond quote and ratings.	**How to Read Bond Quotes and Ratings**

Key Terms

Key terms are defined in the Glossary and appear in **bold** text in the chapter.

after-acquired clause

bankers' acceptance

bond

bond residue

callable bond

call protection period

collateral trust bond

commercial paper

conversion price

conversion privilege

convertible bond

coupon rate

debenture

debt security

denominations

discount

domestic bond

election period

equipment trust certificate

Eurobond

extendible bond

face value

first mortgage bond

fixed-income securities

floating-rate securities

forced conversion

foreign bond

foreign pay bond

guaranteed investment certificate

index-linked notes

instalment debenture

liquid bonds

marketable bonds

market price

maturity date

mortgage

negotiable bonds

par value

premium

principal

protective provisions

purchase fund

real return bond

redeemable bond

retractable bond

serial bond

sinking fund

strip bond

subordinated debenture

term deposit

term to maturity

Treasury bill

trust deed

variable-rate securities

yield to maturity

zero-coupon bond

Introduction

Governments, corporations, and many other entities borrow funds to finance and expand their operations. In addition to bank lending and private loans, these entities also have the option of issuing fixed-income securities in the financial markets. From the investor's perspective, purchasing a fixed-income security essentially represents the decision to lend money to the issuer. Investors become creditors of the issuing organization. They do not gain ownership rights, as they would with an equity investment.

Many investors overlook the fixed-income market. Trading activity on the Toronto Stock Exchange (TSX) and other international stock markets grabs most of the investing public's attention. Trading in bonds, Treasury bills (T-bills), and other fixed-income securities tends to be less transparent than other investments, such as exchange-traded funds listed on the TSX.

Most investors would be surprised to learn the magnitude of the fixed-income market. To put it in perspective, the dollar amount traded on Canada's bond markets consistently averages about 10 times that of total equity trading in any given year. The significance of the bond and fixed-income markets gives you an appreciation of the importance of having a thorough understanding of the features, characteristics, and terminology of the fixed-income market.

This chapter provides a primer on all aspects of fixed-income securities.

The Fixed-Income Marketplace

1 | Describe the fixed-income marketplace and the rationale for issuing debt securities.

Fixed-income securities represent debt of the entity that issues them. As such, you will often hear the term **debt securities** to describe them. The terms of a fixed-income security include a promise by the issuer to repay the maturity value, or **principal**, on the **maturity date**, and to pay interest either at stated intervals over the life of the security or at maturity. In most cases, if the security is held to maturity, the rate of return is fairly certain. Interest payments paid by issuers are taxed as ordinary income.

Fixed-income securities trading in today's markets come in many varieties, including **bonds**, **debentures**, money market instruments, **mortgages**, and even preferred shares. The various types reflect widely different borrowing needs and investor demands. Issuers of fixed-income securities can modify the terms of a basic security to suit both their needs and costs, and to provide acceptable terms to various lenders.

The Rationale for Issuing Fixed-Income Securities

Corporations and governments regularly raise money to finance their operations by issuing fixed-income securities. Governments fund their programs and other obligations largely through tax revenue. However, when a government spends more on those obligations than it receives in tax revenue, it must make up the difference by borrowing money. Most governments borrow by issuing fixed-income securities.

Unlike governments, companies have various choices available when their expenses outweigh their revenue; issuing fixed-income securities is one option. They can also raise cash by selling assets, borrowing from a bank, or issuing equity securities. The choice of financing method depends on the cost, given that companies generally prefer to raise money by the cheapest means possible.

Although companies issue fixed-income securities for various purposes, two particular reasons are commonly cited:

- To finance operations or growth
- To take advantage of financial leverage

EXAMPLES

Two examples of financing operations or growth:

A company wants to invest and expand its current operations so that it can meet the increasing demand for its product lines. The company decides to announce a new bond issue for “general corporate purposes”.

A corporation is interested in purchasing a company that specializes in making paper bags for grocery store chains. The cost of the purchase is $3 million. The corporation does not want to spend any of its available cash on the purchase, so instead it issues $3 million in bonds. The proceeds from the bond issue are used to complete the purchase, and the borrowing costs are paid out from the corporation’s revenue stream.

An example that takes advantage of financial leverage:

A company wants to open a new plant to increase its production capacity. The company issues $1 million in bonds at 10% interest, at a cost of $50,000 a year after tax. The expanded capacity is expected to increase after-tax profits by more than $100,000 a year. The company proceeds with the project because it can increase the return on shareholders’ equity by borrowing the money. In other words, the expected return from investing the borrowed funds is greater than the cost of borrowing. When the return from borrowing is higher than the borrowing cost, the result is *financial leverage*.

the Basic Features and Terminology of Fixed-Income Securities

2 | Define the terminology, main features, and characteristics of the various fixed-income securities.

In most cases, when people speak of fixed-income securities, they are referring to bonds. However, other types of fixed-income securities also exist, which we will discuss later in this chapter.

A bond is a long-term, fixed-obligation debt security that is secured by physical assets—such as a building or a railway car—owned by the issuing company.

Bonds are considered fixed-income securities because they impose fixed financial obligations on issuers—that is, the payment of regular interest payments and the return of principal on the date of maturity. The details of a bond issue are outlined in a legal document called the **trust deed** and written into a bond contract. If the issuer can no longer meet the fixed obligations, the bond goes into default. When that happens, the provisions of the trust deed allow the bondholders to seize specified physical assets and sell them to recover their investment.

A debenture is a type of bond that is secured by something other than a specified physical asset, typically by a general claim on residual assets. Therefore, the debenture is backed by the general creditworthiness of the issuer. For this reason, debentures are also referred to as *unsecured bonds*. Aside from this difference, debentures are similar to bonds, and as such, they promise the payment of regular interest and the repayment of principal at maturity.

In this chapter, we follow the industry practice of referring to both bonds and debentures as bonds, unless the difference is important. For example, government bonds are never secured by physical assets, and so technically they are debentures; in practice, however, they are always referred to as bonds.

Bond Terminology

Table 6.1 defines the important characteristics of a bond.

Table 6.1 | Characteristics of a Bond

Par value	The **par value** of a bond (also called **face value**) is the principal amount the bond issuer contracts to pay at maturity to the bondholder. A bond is issued and matures at its par value.
Coupon rate	The **coupon rate**, or simply the coupon, is the interest or rate paid by the bond issuer relative to the bond's par or face value over the term of the bond. The coupon represents the regular interest the bond issuer is obliged to pay to the bondholders. Most bonds are coupon bonds, paying fixed coupon rates. Most bonds make semi-annual coupon payments; some bonds pay coupons on an annual basis. The coupon rate is set at the time of issue and typically does not change over the term of the bond. The bondholders receive a fixed-income stream of payments based on that coupon rate. As you will learn in the chapter on bond pricing, changes in market interest rates impact the value and price of a bond. As interest rates rise and fall, relative to the coupon rate, the price or value of a bond will also rise and fall accordingly. However, the coupon payments are not impacted by changes in interest rates.
Maturity date	The **maturity date** is the date at which a bond matures, when the principal amount of the loan is paid back to the investor holding the bond. Upon maturity, the final interest payment is also made.
Term to maturity	The **term to maturity** is the time that remains before a bond matures.
Bond price	The bond price is the present discounted value of all the future payments that the bond issuer is obligated to pay the investor. Specifically, the bond price is the sum of the present value of all future interest payments plus the present value of the future repayment of the loan upon maturity. Alternatively, you can think of it as the price you would pay today to earn interest every six months and receive the principal repayment upon maturity. Once a bond is issued, it can trade at a value that is equal to, above, or below its par value depending on the direction of market interest rates. The price of a bond is quoted using an index with a base value of 100. For example, $1,000 par value with a price quoted at 97 refers to a price of $97 for each $100 of face value. Since there are 10 units of $100 face value in a $1,000 bond, the price of

	a bond with a $1,000 face value and a price quote of 97 would be $970.
Yield to maturity	The **yield to maturity** is the annual return on a bond that is held to maturity. You will learn more about this concept in the chapter on bond pricing and trading.

EXAMPLE

A $1,000, 6%, semi-annual coupon bond due January 10, 2034 will pay $30 to the bondholder on January 10 and on July 10 of each year until maturity. The semi-annual payment of $30 represents the fixed obligation that the issuer is required to make for the life of the bond. The yield to maturity on the bond on January 10, 2022 is 5.2% and trades at a price of 107.491 for a total cost of $1,074.91.

The characteristics of this bond are summarized as follows:

$1,000	Upon maturity, the issuer will pay back to the bondholder the principal amount of $1,000, which represents par value, or the face value, of the bond.
6%	The issuer pays the bondholder a coupon rate of 6%, which is paid in amounts of $30 twice a year.
January 10, 2034	The maturity date of the bond is January 10, 2034.
13 years	The term to maturity of the bond is 13 years (January 10, 2022 to January 10, 2035).
107.491	The bond price is 107.491, which means each $100 of face value will cost $107.491 to purchase.
	Based on the quoted price of 107.491, the price of a $1,000 face value bond is currently 107.491% of its face value, or $1,074.91 (calculated as 107.491 / 100 x $1,000). In other words, the $1,000 face value bond has 10 units of $100 face value and therefore costs 10 × $107.491.
5.2%	The yield to maturity on the bond (the annual return if purchased on January 10, 2022 and held to maturity) is 5.2%.

Bond Features

Bonds come in many varieties, but most bonds have certain features in common, including those described below.

Interest on Bonds

A bond's coupon indicates the income the bondholder will receive. Therefore, the coupon is also referred to as *interest income*, *bond income*, or *coupon income*. Most bonds pay a fixed coupon rate, although some bonds have variable rates (referred to as **floating-rate securities**).

Interest payments can take the following forms:

- Coupon rates can change over time, according to a specific schedule, as with *step-up bonds*, and most types of savings bonds.
- Interest can be compounded over time and paid at maturity, rather than periodically, as with strip bonds (coupons and residuals).
- A rate of interest does not have to be applied; the loan can be compensated in the form of a return based on future factors, such as the change in the level of an equity index. These types of securities are called **index-linked notes**.

In North America, the majority of bonds pay interest twice a year, at six-month intervals. Other bonds may pay interest monthly or yearly.

Did You Know?

The majority of bonds pay interest semi-annually. For the purposes of this course, you can assume that bonds pay interest twice yearly unless stated otherwise. In all cases, the amount of interest at each payment date is equal to the coupon rate divided by the number of payments per year.

Denominations

Bonds can be purchased only in specific **denominations**. Normally, an issue designed for a broad retail market is issued in smaller denominations, the most common being $1,000 and $10,000. Larger denominations may be issued to suit the preference of investing institutions, such as banks and life insurance companies. These denominations may be worth millions of dollars.

Bond Pricing

A bond trading at a quoted price of 100 is said to be trading *at par* (i.e., at face value). A bond trading below par—at a price of 98, for example—is said to be trading at a **discount** (i.e., based on the index of 100, the bond is trading at 98% of face value). A bond trading above par—at a price of 104, for example—is said to be trading at a **premium**. Market interest rates, relative to the coupon on a bond, are a key determinant of the price of a bond.

You will learn more about this concept in the chapter on bond pricing and trading.

Bond Yields

A bond yield, also referred to as what a bond is *yielding*, represents the amount of return on the bond. There are several types of yields, including yield to maturity which we mentioned above. The interest income that you earn on a bond divided by its face value is another type of yield. We can also determine the current yield on a bond by dividing the coupon income by the current **market price**. As you will learn in the chapter on bond pricing and trading, while the coupon income on a bond stays constant over its term, yield and price fluctuate day to day.

Term to Maturity

Bonds can be grouped into three categories according to their term to maturity:

- *Short-term* bonds have more than one year but less than five years remaining in their term.
- *Medium-term* bonds have terms of five to 10 years.
- *Long-term* bonds have terms greater than 10 years.

Certain bonds that have a term to maturity of up to one year trade as money market securities. Money market securities are a special type of short-term, fixed-income security, generally with a term of one year or less. These securities include T-bills and commercial paper, but some high-grade bonds also qualify when their terms are reduced below the one-year mark.

Did You Know?

A bond that was issued eight years ago with an original term of 15 years is no longer a 15-year bond. Because eight years have passed, and only seven remain in the life of the bond, it is now a seven-year bond. In other words, providing that it is not called before its maturity date, a bond classified as a long-term bond when first issued becomes, over time, a medium-term bond, a short-term bond, and, eventually, a money market security.

Liquidity, Negotiability, and Marketability

Liquidity, negotiability, and marketability all refer to the ease with which bonds can be traded.

Liquid bonds trade in significant volumes. Medium and large trades can be made quickly without a significant sacrifice on the price. For example, Government of Canada bonds have very good liquidity given that there is an active market for these bonds, i.e., they are generally in high demand by both domestic and international investors.

Negotiable bonds can be transferred because they are in *good delivery* form. Among other things, good delivery generally refers to a time when actual paper copies of bonds and fixed-income securities were delivered between investment dealers. Today, a bond's negotiability is not really an issue because most bonds are electronically recorded by depositories that keep track of ownership.

Marketable bonds have a ready market. For example, a private placement or other new issue may have clients willing to buy it because its price and features are attractive. However, marketable bonds are not necessarily liquid because most private placements do not have an active secondary market.

Strip Bonds

A **strip bond** (also called a **zero-coupon bond**) is created when a dealer acquires a block of high-quality bonds and separates the individual, future-dated interest coupons from the rest of the bond (known as the underlying **bond residue**). The dealer then sells each coupon, as well as the residue, separately at significant discounts to their face value. Holders of strip bonds receive no interest payments. Instead, the strips are purchased at a price that provides a certain compounded rate of return when they mature at par. Strip bonds typically trade at a *discount* to their par value. The income on strip bonds is considered interest income rather than a capital gain. Tax must be paid annually on the interest income, even though that income is not received until the bond matures. Therefore, it is often recommended that strip bonds be held in a tax-deferred plan such as a registered retirement savings plan.

Did You Know?

A capital gain occurs when property such as stocks or bonds is sold at a price that is higher than the purchase price. Conversely, a capital loss occurs when such property is sold at a lower price than the purchase price.

EXAMPLE

An investment dealer buys $10 million face value of a five-year, semi-annual pay Government of Canada bond with a coupon of 5.50%, intending to strip the bond for sale to clients. With this bond, the dealer can create 10 different strip coupons, each with a face value of $275,000 (calculated as $10 million × 0.055 × 0.5). Each coupon will have its own maturity date. The face value of each strip coupon is equal to the dollar value of each interest payment on the regular bond. The bond's principal repayment can be sold as a residual with a face value of $10 million.

The strip coupons are then sold at a discount to the $275,000 face value. For this example, let's assume that the coupon payable in three years sells today for $233,690. If you were buying this strip bond today and holding it until the coupon's payment date, you would receive $275,000 in three years. The strip bond does not generate any other regular income for the investor during the three-year period.

Note that bond price calculations are covered in Chapter 7.

Callable Bonds

Bond issuers often reserve the right, but not the obligation, to pay off the bond before maturity, either to take advantage of lower interest rates or simply to reduce their debt when they have the excess cash to do so. This privilege is known as a call or redemption feature. A bond bearing this clause is known as a **callable bond** or **redeemable bond**. As a rule, the issuer agrees to give notice of 10 to 30 days that the bond is being called or redeemed.

In Canada, most corporate and provincial bond issues are callable. However, Government of Canada bonds and municipal debentures are usually non-callable.

STANDARD CALL FEATURES

A standard call feature allows the issuer to call bonds for redemption at a specified price on either specific dates or specific intervals over the life of the bond. The call price is usually set higher than the par value of the bond, which provides a premium payment for the holder. The premium is a compensation to the investor, who no longer has an investment that was expected to receive a stated income for a certain number of years. The closer the bond is to its maturity date before it is redeemed, the less the hardship for the investor. Therefore, the redemption price is often set on a graduated scale, with the premium payment becoming lower as the bond approaches its maturity date.

Provincial bonds are usually callable at 100 plus accrued interest (i.e., interest that has accumulated since the last interest payment date). Accrued interest belongs to the holder of the bond.

The period before the first possible call date (during which a callable bond cannot be called) is known as the **call protection period**.

EXAMPLE

DEF Corporation's 7.375% debentures are due May 1, 2028. They are not redeemable before May 1, 2024. Starting May 1, 2024, they are redeemable according to the following payment schedule on 30 days' notice, up to the 12 months ending April 30 of each year:

- From May 1, 2024 to April 30, 2025 at 103.68
- From May 1, 2025 to April 30, 2026 at 102.46
- From May 1, 2026 to April 30, 2027 at 101.23
- From May 1, 2027 and thereafter at 100.00 (at par to maturity)

Suppose you own a $1,000 debenture of this issue and the debenture is called. The following are examples of payment received, depending on what date it is called:

- Called on January 31, 2025: $1,036.80 plus accrued interest.
- Called on August 15, 2025: $1,024.60 plus accrued interest.

- Called on March 20, 2027: $1,012.30 plus accrued interest.
- Called on December 1, 2027: $1,000.00 plus accrued interest.

Extendible and Retractable Bonds

Some corporate bonds are issued with extendible or retractable features.

Extendible bonds and debentures are usually issued with a short maturity term (typically five years), but with an option to extend the investment. This option means that the investor can exchange the debt for an identical amount of longer-term debt (typically 10 years) at the same rate or a slightly higher rate of interest. In effect, the maturity date of the bond can be extended so that the bond changes from a short-term bond to a long-term bond.

EXAMPLE

GHI International Inc. 7% Extendible Junior Bonds, Series B2.1, due July 26, 2025, are extendible to July 26, 2030 from July 26, 2025 at a rate of 7.125%.

Retractable bonds are the opposite of extendible bonds. They are issued with a long maturity term but with the option to redeem early. The maturity date is usually at least 10 years, but investors have the right to redeem the bonds at par by a retraction date (which is typically five years earlier than the maturity date).

EXAMPLE

JKL Inc. 4% bonds are due on June 30, 2030 and are retractable at par on June 30, 2025.

With both extendible and retractable bonds, the decision to exercise the maturity option must be made during a specific time called the **election period**. In the case of an extendible bond, the election period may last from a few days to six months, or more, before the short maturity date. During the election period, the holder must notify the appropriate trustee or an agent of the debt issuer to either extend the term of the bond or allow it to mature on the earlier date. If the holder takes no action, the bond automatically matures on the earlier date and interest payments cease.

In the case of a retractable bond, if the holder does not notify the trustee or agent before the retraction date of his or her decision to shorten the term of the bond, the debt remains a longer-term issue.

Convertible Bonds and Debentures

Convertible bonds and convertible debentures (often called *convertibles*) combine certain advantages of a bond with the option of exchanging the bond for common shares. In effect, a convertible security allows an investor to lock in a specific price (called the *conversion price*) for the common shares of the company. The right to exchange a bond for common shares on specifically determined terms is called the **conversion privilege**.

Convertible bonds are like regular bonds; they have a fixed interest rate and a definite date on which the principal must be repaid. However, they offer the possibility of capital appreciation through the right to convert the bonds into common shares at the holder's option, at stated prices over stated periods. Convertible bonds therefore offer the investor the potential to share in the company's growth.

The conversion privilege makes a bond more attractive to investors, and thus more saleable. It not only tends to lower the cost of the money borrowed; it may also enable a company to raise equity capital indirectly on terms that are more favourable than the terms for the sale of common shares.

Characteristics of Convertible bonds

The **conversion price** of most convertible bonds goes up gradually over time to encourage early conversion. Convertible bonds may normally be converted into stock at any time before the conversion privilege expires. However, some convertible debenture issues have a clause in their trust deeds that stipulates "no adjustment for interest or dividends". This clause excuses the issuing company from having to pay any accrued interest on the convertible bond that has built up since the last designated interest payment date.

Similarly, any common stock received by the bondholder from the conversion normally entitles the holder only to those dividends declared and paid after the conversion takes place. Some convertibles will also have a *protection against dilution* clause, where if the common shares of the company are split the conversion privilege will be adjusted accordingly. (A stock split occurs when the issuing company decides to increase the number of shares outstanding. You will learn more about stock splits in the chapter on common shares.)

Convertibles are normally callable, usually at a small premium and after reasonable notice.

FORCED CONVERSION

Forced conversion is an innovation built into certain convertible debt issues to give the issuing company more control in calling in the debt for redemption. The conversion *forces* bondholders to convert the company's bonds into a predetermined number of common shares.

The issuing company will typically be interested in forcing a conversion when market interest rates fall below the bond's coupon rate, or if the price of the underlying common shares begins to trade above the conversion price.

This redemption provision usually states that, once the market price of the common stock involved in the conversion rises above a specified level and trades at or above this level for a specific number of consecutive trading days, the company can call the bonds for redemption at a stipulated price. The price at which the company calls the bonds back is much lower than the level at which the convertible debt would otherwise be trading because of the rise in the price of the common stock.

A forced conversion is an advantage to the issuing company, rather than to the debt holder, for several reasons:

- It relieves the issuer of the obligation to make interest payments on debt once investors convert their debt into equities.
- It can free up room for new debt financing if needed.

However, a forced conversion is not so disadvantageous to the bondholder that it detracts from an issue when it is first sold. Once the price of the convertible debt rises above par, subsequent prospective buyers should check the spread between the prevailing purchase price and the possible forced conversion level.

EXAMPLE

Assume that you own 7% convertible bonds of RFC Inc. that are due February 1, 2028. Before February 1, 2025, the bonds are convertible into 44.033 common shares for each $1,000 of face value. Each common share under this arrangement has a conversion price of $22.71 (calculated as $1,000 ÷ 44.033). The bonds are not redeemable by the company before February 1, 2023.

The company has the option to pay you the principal amount on redemption or maturity, or to pay you in common shares. The number of common shares is obtained by dividing $1,000 by 95% of the weighted average trading price for 20 consecutive trading days on the TSX, ending five days before maturity or the date fixed for redemption.

This provision is considered to be a forced conversion clause because you must choose whether to convert the bond into common shares at $22.71 a share or accept the company's redemption offer. The second option could force you to pay a considerably higher price per share. For example, if the weighted average price was $27, the company would divide $1,000 by $25.64 (calculated as 95% × $27) to arrive at 39 shares. You would receive 39 shares, compared to 44.033 shares if you had chosen to convert before the forced conversion was imposed by the issuer.

Market Behaviour of Convertibles

The market price of convertible bonds and debentures is influenced by their investment value as a fixed-income security and by the price of the common shares into which they can be converted. When the stock price of the issuing company is below the conversion price, the convertible behaves like any other straight fixed-income security with the same features. However, because these bonds can be converted into common shares, their price behaves differently than comparable straight fixed-income securities. When the price of the underlying stock rises above the conversion price (the bond price divided by the number of shares that the bond can be converted into), the bond price rises accordingly. Conversely, even if interest rates rise sharply, the bond price will not drop below the conversion price.

EXAMPLE

Assume you own an ABC 6% convertible bond that trades at $980 and can be converted into 40 ABC common shares that currently trade at $22 a share. Even if interest rates rise sharply and comparable bonds that are not convertible fall in price, the ABC bond will have a conversion value of at least $880 because it can be converted into 40 common shares that trade at $22 (calculated as 40 shares × $22 = $880).

If the common shares now trade at $27, the price of the bond will rise accordingly to at least $1,080, even if the comparable bonds that are not convertible still trade at $980. The reason is simple: the investor holds a security that can be sold today for $1,080 (calculated as 40 shares × $27) if converted.

In this example, the conversion price of the ABC convertible is $24.50, which is the bond price divided by the number of shares that the bond can be converted into (calculated as $980 ÷ 40). You can think of the price of $24.50 as the price per share to buy the common stock if the investor purchased those shares by first buying the convertible bond for $980 and then converting the bonds into shares.

Sinking Funds and Purchase Funds

Some issuers must repay portions of their bonds for redemption before maturity. They fulfil this obligation in one of two ways:

- By calling them on a fixed schedule of dates (through a **sinking fund** obligation)
- By buying them in the secondary market when the trading price is at or below a specified price (through a sinking fund or a **purchase fund**)

Sinking Funds

Sinking funds are sums of money that are set aside out of earnings each year to provide for the repayment of all or part of a debt issue by maturity. Sinking fund provisions are as binding on the issuer as any mortgage provision. Some corporate bonds have a mandatory call feature for sinking fund purposes. The issuer will attempt to buy the debt in the secondary market when the price is at or below a specified price. If it is unable to purchase the required amount, it will resort to calling the debt in order to meet its obligations.

EXAMPLE

ABC 6.89% debentures, due June 17, 2035, have a mandatory sinking fund. The company must retire $1,000,000 of the principal amount on June 17 every year, from 2022 to 2035 inclusive. Any debentures purchased or redeemed by the company other than through the sinking fund can be paid to the trustee as part of the sinking fund obligation. The debentures are redeemable for sinking fund purposes at the principal amount plus accrued interest to the date specified.

Purchase Funds

Some companies have a purchase fund instead of a sinking fund, whereby a fund is set up to retire a specified amount of the outstanding bonds or debentures through purchases in the market. The purchases must be available at or below a stipulated price.

EXAMPLE

DEF Inc. 5.5% debentures, due April 15, 2030, have a purchase fund. Beginning on July 1, 2022, the company must make all reasonable efforts to purchase at or below par 1.125% of the aggregate principal amount during each quarter.

Sinking fund provisions are binding, whereas purchase funds retire bonds only under the right market conditions. Therefore, purchase funds may retire a smaller portion of an issue than a sinking fund depending on market conditions.

Protective Provisions of Corporate Bonds

In addition to principal repayment features, corporate bonds may also have general covenants that secure the bond. The covenants make it more likely for the investor to receive all of the due proceeds. These covenant clauses, also known as **protective**

provisions, are essentially safeguards in the bond contract to guard against any weakening in the security holder's position. The object is to create a strong instrument that does not force the company into a financial constraint.

Some of the more common protective covenants found in Canadian corporate bonds are listed below:

Security	In the case of a mortgage or an asset-backed or secured debt, this clause includes details of the assets that support the debt.
Negative pledge	This clause provides that the borrower will not pledge any assets if the pledge results in less security for the debt holder.
Limitation on sale and leaseback transactions	This clause protects the debt holder against the firm selling and leasing back assets that provide security for the debt.
Sale of assets or merger	This clause protects the debt holder in the event that all of the firm's assets are sold or that the company is merged with another company, forcing either the retiring of the debt or its assumption by the newly-merged company.
Dividend test	This provision establishes the rules for the payment of dividends by the firm and ensures equity will not be drained by excessive dividend payments.
Debt test	This provision limits the amount of additional debt that a firm may issue by establishing a maximum debt-to-asset ratio.
Additional bond provisions	This clause states what financial tests and other circumstances allow the firm to issue additional debt.
Sinking or purchase fund and call provisions	This clause outlines the provisions of the sinking or purchase fund and the specific dates and price at which the firm can call the debt.

Government of Canada Securities

3 | Summarize the features and characteristics of Government of Canada securities.

The Government of Canada issues fixed-income securities to finance deficits, fund its programs, and finance infrastructure projects (highways, transportation networks, water, and electric systems). The different types of government debt issues are described below.

Bonds

The Government of Canada issues marketable bonds in its own name. It also allows Crown corporations to issue debt that has a direct call on the Government of Canada. Government of Canada bonds have a specific maturity date and a specified coupon or interest rate. They are also transferable, which means that they can be traded in the market.

EXAMPLE

The Farm Credit Corporation, a Crown Agency, issues medium- and long-term notes that are "…direct obligations of Farm Credit and as such will constitute direct obligations of Her Majesty in right of Canada. Payment of principal and interest on the Notes will be a charge on and payable out of the Consolidated Revenue Fund."

All Government of Canada bonds are *noncallable*; therefore, the government cannot call them for redemption before maturity.

When comparing the bonds issued by Canadian issuers (including corporations as well as federal, provincial, and municipal governments), investors assign the highest quality rating to federal government bonds. Foreign investors, on the other hand, compare the quality of Canadian issues to the issues of other governments. The relative risk of investing in each country is reflected in the yields of their bonds, and those yields fluctuate in response to political and economic events.

Treasury Bills

Treasury bills (T-bills) are short-term government obligations offered in denominations from as low as $1,000. These securities appeal to a broad range of investors, including large institutional investors such as banks, insurance companies, and trust and loan companies, as well as to retail investors.

T-bills do not pay interest; instead, they are sold at a discount (below par) and mature at 100. The difference between the issue price and par at maturity represents the return on the investment. Under the *Income Tax Act*, this return is taxable as income, not as a capital gain.

Every two weeks, regular T-bills are sold at auction by the Ministry of Finance through the Bank of Canada. These bills have original terms to maturity of approximately three months, six months, and one year.

Real Return Bonds

Like conventional bonds, **real return bonds** pay interest throughout the life of the bond and repay the original principal amount upon maturity. Unlike conventional bonds, however, the coupon payments and principal repayment are adjusted for inflation to provide a fixed real coupon rate. At each interest payment date, the real coupon rate is applied to a principal balance that has been adjusted for the cumulative level of inflation since the date the bond was issued. The cumulative level of inflation is known as the bond’s *inflation compensation*.

EXAMPLE

Government bonds carrying a 4.25% coupon were priced at 100 at issue date. They provide a real yield of about 4.25% to maturity on December 1, 2022. Both the semi-annual interest payments and the final redemption value of each bond are calculated by including an inflation compensation component.

Assume that the rate of inflation (as measured by changes in the consumer price index) was 1.5% over the first six-month period after issue. Therefore, the value of a $1,000 real return bond at the end of the six months was $1,015. The interest payment for the half-year was based on this amount ($1,015), rather than the original bond value of $1,000. At maturity, the maturity amount is calculated by multiplying the original face value of the bond by the total amount of inflation since the issue date.

Provincial and Municipal Government Securities

4 | Summarize the features and characteristics of provincial and municipal government securities.

Provincial bonds, like Government of Canada bonds, are actually debentures, which means that they are simply promises to pay. Their value depends upon the province's ability to pay interest and repay principal. No provincial assets are pledged as security. All provinces have statutes governing the use of funds obtained through the issue of bonds.

Provincial bonds are second in quality only to Government of Canada direct and guaranteed bonds because most provinces have taxation powers second only to the federal government. However, different provinces' direct and guaranteed bonds trade at differing prices and yields.

Bond quality is determined by two primary factors: credit quality and market conditions. The credit quality of a province—that is, the degree of certainty that both principal and interest will be paid when due—depends on such factors as the amount of existing debt in the province per capita, the level of federal transfer payments, the stability of the provincial government, and the wealth of the province in terms of natural resources, industrial development, and agricultural production.

Guaranteed Bonds

Many provinces also guarantee the bond issues of provincially appointed authorities and commissions.

EXAMPLE

The Ontario Electricity Financial Corporation's 8.5% notes, due May 26, 2025, are "Irrevocably and Unconditionally Guaranteed by the Province of Ontario."

Provincial guarantees may also extend guarantees to cover municipal loans and school board costs. In some instances, provinces extend a guarantee to industrial concerns, usually as an inducement to a corporation to locate or remain in that province. Most provinces (and some of their enterprises) also issue T-bills. Investment dealers and banks purchase them, both at tender and by negotiation, usually for resale.

In addition to issuing bonds in Canada, the provinces and their enterprises also borrow extensively in international markets. Unlike the federal government, whose policy is to borrow abroad largely to maintain exchange reserves, the provinces resort to foreign markets to take advantage of lower borrowing costs. Their decision to borrow from these markets depends on the foreign exchange rate and financial market conditions.

Issues sold abroad are underwritten by syndicates of dealers and banks similar to those that handle foreign financing for Crown corporations of the federal government. In recent years, issues have been sold, for example, payable in Canadian dollars, U.S. dollars, euros, Swiss francs, and Japanese yen.

Provincial Securities

Some provinces may offer their own savings bonds with the following characteristics that distinguish them from other provincial bonds:

- They can be purchased only by residents of the province.

- They can be purchased only at a certain time of the year.
- They may have redemption rules, which can vary depending on the province.

Some provinces may issue different types of savings bonds. Check with the securities regulator in your province for more information.

Municipal Securities

Today, the instrument that most municipalities use to raise capital from market sources is the **instalment debenture** (also called a **serial bond**). Part of this bond matures in each year of its term.

EXAMPLE

A debenture of $1 million may be issued so that $100,000 becomes due each year over a 10-year period. The municipality is actually issuing 10 separate debentures, each with a different maturity. At the end of 10 years, the entire issue will have been paid off.

Instalment debentures are usually non-callable, which means that the investor purchases them knowing beforehand how long the funds are expected to remain invested. Also, if the money is needed at future specific dates, it can be invested in an instalment debenture so that it will be available when it is needed.

Generally, a municipality’s credit rating depends upon its taxation resources. All else being equal, the municipality with a diversified industrial sector is a better investment risk than a municipality built around one major industry.

Types of Corporate Bonds

5 | Summarize the features and characteristics of corporate bonds.

Corporations have more choices than governments to raise capital. They can sell ownership of the company by selling stocks to investors or they can borrow money from investors by selling fixed-income securities. Generally, corporate bonds have a higher risk of default than government bonds. This risk depends on various factors including the market conditions prevailing at the time of issue, the credit rating of the corporation issuing the bond, and the government to which the bond issuer is being compared.

The various types of corporate fixed-income securities are described below.

Mortgage Bonds

A mortgage is a legal document containing an agreement to pledge land, buildings, or equipment as security for a loan. The agreement entitles the lender to take over ownership of these properties if the borrower fails to pay interest or repay the principal when it is due. The lender holds the mortgage until the loan is repaid, at which point the agreement is cancelled or destroyed. The lender cannot take ownership of the properties unless the borrower fails to satisfy the terms of the loan.

There is no fundamental difference between a mortgage and a mortgage bond except in form. Both are issued to allow the lender to secure property if the borrower fails to repay the loan.

First mortgage bonds are the senior securities of a company. They are so named because they constitute a first charge on the company's assets, earnings, and undertakings before unsecured current liabilities are paid. In analyzing a company's financial position, you must study each first mortgage issue to determine exactly what properties are covered by the mortgage.

First mortgage bonds are generally regarded as the best security a company can issue, particularly if the mortgage applies to "all fixed assets of the company now and hereafter acquired". This last phrase, called the **after-acquired clause**, means that all assets can be used to secure the loan, even those acquired after the bonds were issued.

Floating-Rate Securities

Floating-rate securities (also called **variable-rate securities**) are a type of corporate issue that automatically adjusts to changing interest rates. These securities can be issued with longer terms than more conventional issues.

Floating-rate securities have proved popular because they offer an advantage to investors during periods of rising interest rates. For example, when interest rates are rising, the interest paid on floating-rate debentures is adjusted upwards at regular intervals of six months, which improves the price and yield of the debentures. The disadvantage of these bonds is that when interest rates fall, the interest payable on them is adjusted downwards at six-month intervals. A minimum rate on the bonds can provide some protection, although the minimum rate is normally relatively low.

Domestic, Foreign, and Eurobonds

Bonds can be classified according to where and how they are issued. **Domestic bonds** are issued in the currency and country of the issuer. Therefore, bonds issued by a Canadian corporation or by the Canadian government, in Canadian dollars, in the Canadian market are domestic bonds. These bonds are the most common type.

Foreign bonds are issued outside of the issuer's country and denominated in the currency of the country in which they are issued. Foreign bonds give the issuers access to sources of capital in other countries.

EXAMPLE

When a Canadian company issues bonds in U.S. dollars in the United States, these bonds are considered foreign bonds in the U.S. market. They are also called *Yankee* bonds.

When a British company issues yen-denominated bonds in Japan, the bonds are called *Samurais* and are considered foreign bonds in the Japanese market.

When a foreign company issues Canadian dollar-denominated bonds in Canada, the bonds are called *Maple* bonds and are considered foreign bonds in the Canadian market.

Some bonds offer the investor a choice of interest payments in either of two currencies; other bonds pay interest in one currency and the principal in another. These so-called **foreign pay bonds** offer investors increased opportunity for portfolio diversification while providing the issuer with cost-effective access to capital in other countries.

Eurobonds are international bonds issued in a currency other than the currency of the country where the bond is issued. The Eurobond market is a large international market with issues in many currencies, including Canadian dollars. This market attracts both international and domestic investors looking for alternative investments.

EXAMPLE

Assume that the Canadian government has decided to issue a new bond denominated in U.S dollars in the Euromarket. The news of the issue attracts investors around the globe. However, as a Canadian investor seeking foreign currency exposure, you may also be interested in the new bond.

If a Canadian corporation or government issues Eurobonds denominated in Canadian dollars, the bonds are called EuroCanadian bonds. Eurobonds denominated in U.S. dollars are called Eurodollar bonds. Other examples are shown in Table 6.2.

Table 6.2 | Types of Bonds by Currency and Location

Issued by	Currency	Country of Issue	Called
Canadian	CAD	[illegible]	Domestic bond
[illegible]	[illegible]	[illegible]	[illegible] bond
Canadian	USD	European	Eurobond (Eurodollar)
Canadian	CAD	European Market	Eurobond (EuroCanadian)
Canadian	USD	United States	Foreign (Yankee) bond

Other types of corporate debt issued in the marketplace include the following fixed-income securities:

- **Collateral trust bonds** are secured by a pledge of securities, or collateral. They differ from mortgage bonds that are secured by a pledge of real property. Collateral trust bonds are issued by companies, such as holding companies, that own few, if any, fixed assets on which they can offer a mortgage. However, they normally own securities of subsidiaries.
- **Equipment trust certificates** pledge equipment as security instead of real property. For example, a railway company may issue these kinds of bonds, using its locomotives and train cars (called *rolling stock*) as security. These certificates are usually issued in serial form, with a set amount that matures each year.
- **Subordinated debentures** are junior to other securities issued by the company or other debts assumed by the company. The exact status of an issue of subordinated debentures is described in the prospectus.
- **Corporate notes**: A corporate note is a short-term unsecured promise made by a corporation to pay interest and repay the funds borrowed at a specific date, or specific dates.
- **High-yield bonds**: High-yield bonds (also called speculative bonds) are considered non-investment grade. These lower credit-quality bonds have a higher risk of default because they are deemed to have greater uncertainty over the issuer's repayment of their financial obligations. These bonds typically pay higher coupons and have higher yields to compensate investors for the added risk.
  Investors looking to improve portfolio returns in a low interest rate environment may consider high-yield bonds. Investors can access these bonds through mutual funds and exchange-traded funds that specialize in bond investments.

Other Fixed-Income Securities

6 | Summarize the features and characteristics of other fixed-income securities.

Bonds and debentures tend to dominate media reports about the fixed-income securities market. However, you should also be familiar with other types of fixed-income securities, including those described below.

Bankers' Acceptances

A **bankers' acceptance** (BA) is a commercial draft (i.e., a written instruction to make payment) drawn by a borrower for payment on a specified date. A BA is guaranteed at maturity by the borrower's bank. As with T-bills, BAs are sold at a discount and mature at their face value, with the difference representing the return to the investor. They trade in multiples of $1,000, with a minimum initial investment of $25,000. They generally have a term to maturity of 30 to 90 days, although some may have a maturity of up to 365 days. BAs may be sold before maturity at prevailing market rates, generally offering a higher yield than Government of Canada T-bills.

Commercial Paper

Commercial paper is either an unsecured promissory note issued by a corporation or an asset-backed security backed by a pool of underlying financial assets. Issue terms range from less than three months to one year. Like T-bills and BAs, commercial paper is sold at a discount and matures at face value. Commercial paper is issued by large firms with an established financial history. Rating agencies rank commercial paper according to the issuer's ability to meet short-term debt obligations. These securities may be bought and sold in a secondary market before maturity at prevailing market rates. They generally offer a higher yield than Government of Canada T-bills.

Term Deposits

Term deposits offer a guaranteed rate for a short-term deposit (usually up to one year). A penalty normally applies for withdrawing funds before a certain period (e.g., within the first 30 days after purchase).

Guaranteed Investment Certificates

Guaranteed investment certificates (GIC) offer fixed rates of interest for a specific term. Both principal and interest payments are guaranteed. They can be redeemable or non-redeemable. Non-redeemable GICs cannot be cashed before maturity, except in the event of the depositor's death or extreme financial hardship. Interest rates on redeemable GICs are lower than non-redeemable GICs of the same term, given that they can be cashed before maturity.

Banks can also customize their GICs to provide investors with more choice. For example, investors can choose a very brief term (although, a large investment may be required) or a term of up to 10 years, depending on the amount invested. Investors can choose other features, such as the frequency of interest payments (e.g., monthly, semi-annual, yearly, or at maturity). They can be set to automatically renew at maturity, or they can be sold to another buyer privately or through an intermediary. Many GICs offer compound interest.

The various types of GICS and examples of each type are described in Table 6.3.

Table 6.3 | Types of Guaranteed Investment Certificates

GIC Type	Specific Feature	Example
Escalating rate GIC	[illegible]	[illegible] $1,000 in a three-year escalating rate GIC. The GIC pays interest of 1.00% in year 1, 1.20% in year 2, and 1.65% in year 3.
Laddered GIC*	[illegible]	[illegible] GIC so that her laddered GIC investment continues.
Installment GIC	[illegible]	[illegible] $5,000 GIC [illegible] $100 taken [illegible] toward buying GICs.
Index-linked GIC	[illegible] guarantees a return of the initial investment at expiry while providing some exposure to equity markets. They may be indexed to domestic or global indexes or a combination of benchmarks.	[illegible] S&P/TSX 60 Index [illegible] 55% [illegible] 33.6% [illegible]
Interest-rate-linked GIC	[illegible]	[illegible] automatically adjust.

*Though more of a strategy than a type, laddered GICs are included in the list of potential GIC types.

Did You Know?

Some banks have developed their own GICs with specialized features. For example, some GICs can be redeemed in case of a medical emergency, whereas others are designed as homebuyers' plans, where regular contributions accumulate for a down payment.

Fixed-Income Mutual Funds and Exchange-Traded Funds

The demand for fixed-income mutual funds and exchange-traded funds that specialize in bonds has grown significantly over the past decade. Increased demand is largely due to equity market uncertainty and a low-interest-rate environment. These managed products provide investors with easy access to a diversified portfolio of debt securities for both domestic and global markets that would be difficult for individual investors to replicate. They also include other attractive features, such as professional investment management, liquidity, and low investment costs. Fixed-income mutual funds and exchange-traded funds are particularly attractive for investors who have a limited amount of money to invest or who find investing in individual bonds too complex.

Fixed-Income Securities

Can you describe the features of the various types of fixed-income securities issued by the Government of Canada, provincial and municipal governments, and corporations? *Complete the online learning activity to assess your knowledge.*

How to Read Bond Quotes and Ratings

7 | Interpret bond quotes and ratings.

A typical bond quote is illustrated in Table 6.4.

Table 6.4 | ABC Bond Quote

Issuer	Coupon	Maturity Date	Bid	Ask	Yield
ABC Company	11.5%	July 1, 2028	99.25	99.75	[illegible]

The quote in Table 6.4 is for an 11.5% coupon bond of ABC Company that matures on July 1, 2028. It shows that, at the time reported, the bond could be sold for $99.25 and bought for $99.75 for each $100 of par or principal amount. (Remember that bond prices are quoted as a percentage of par rather than an aggregate dollar amount.) To buy $5,000 face value of this bond would cost $4,987.50 (calculated as $5,000 × 0.9975 = $4,987.50), plus accrued interest.

Some media sources publish a single price for the bond, which may be the bid price, the midpoint between the final bid and ask quote for the day, or an estimate based on current interest rate levels. Convertible issues are usually grouped together in a separate listing.

In Canada, DBRS, Moody's Canada Inc. (Moody's), and the Standard & Poor's Bond Rating Service (S&P) provide independent rating services for many fixed-income securities. These ratings can help investors assess the quality of their debt holdings and confirm or challenge conclusions based on their own research and experience. Table 6.5 provides an overview of the Moody's global long-term rating scale. The definitions indicate the general attributes of debt bearing any of these ratings. They do not constitute a comprehensive description of all the characteristics of each category.

Similar services in the United States have provided ratings on a ranked scale for many years. Investors closely watch these ratings. Any change in rating, particularly a downgrading, can have a direct impact on the price of the securities involved. From a company's point of view, a high rating provides benefits such as the ability to set lower coupon rates on issues of new securities.

Ratings classify securities from investment grade through to speculative and can be used to compare one company's ability to meet its debt obligations with those of other companies.

The rating services do not manage funds for investors, nor do they buy and sell securities or recommend securities for purchase or sale.

Did You Know?

Investment-grade bonds are bonds issued by high-quality issuers such as the federal government, provincial governments, and select corporations. Investment-grade bonds are considered to have adequate credit quality and an acceptable capacity for the payment of financial obligations. These bonds carry a credit rating of Baa3 from Moody's (or BBB- from S&P, or BBB from DBRS) and higher.

Table 6.5 shows the rationale Moody's uses for the various ratings in its long-term rating scale.

Table 6.5 | Moody's Long-Term Rating Scale

Rating	Description
Aaa	Obligations rated Aaa are judged to be of the highest quality, subject to the lowest

level of credit risk.	
Obligations rated Aa are judged to be of high quality and are subject to very low credit risk.	**Aa**
Obligations rated A are judged to be upper-medium grade and are subject to low credit risk.	**A**
Obligations rated Baa are judged to be medium-grade and subject to moderate credit risk, and as such may possess certain speculative characteristics.	**Baa**
Obligations rated Ba are judged to be speculative and are subject to substantial credit risk.	**Ba**
Obligations rated B are considered speculative and are subject to high credit risk.	**B**
Obligations rated Caa are judged to be speculative, of poor standing, and are subject to very high credit risk.	**Caa**
Obligations rated Ca are highly speculative and are likely in, or very near, default, with some prospect of recovery of principal and interest.	**Ca**
Obligations rated C are the lowest rated and are typically in default, with little prospect for recovery of principal or interest.	**C**

Note: Moody's appends the numerical modifiers 1, 2, and 3 to each generic rating classification from Aa through Caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic category.

Source: Moody's Web Site, www.moodys.com (Information is accurate as at time of publishing.)

Bond Quotes and Ratings

How well can you interpret bond quotes? How sound are the investment decisions you make based on bond ratings? *Complete the online learning activity to assess your knowledge.*

KEY TERMS & DEFINITIONS

Can you read some definitions and identify the key terms from this chapter that match? *Complete the online learning activity to assess your knowledge.*

Summary

In this chapter, we discussed the following key aspects of fixed-income securities:

- Companies use fixed-income securities to finance and expand their operations or to take advantage of operating leverage.
- Bonds pay regular interest in the form of a coupon. Face value (or par value) is the amount the bond issuer contracts to pay at maturity.
- A bond is secured by physical assets, whereas a debenture is secured by the issuer's credit rating or other non-physical asset.
- Bonds come with many different features and options. For example, a callable bond gives the issuer the right, but not the obligation, to pay off the bond before maturity, whereas a convertible bond gives the holder the option to exchange the bond for common shares of the issuing company. Corporate bonds are typically secured with protective covenants.
- Sinking funds are sums of money taken out of earnings each year to provide for the repayment of all or part of a debt issue by maturity. A purchase fund arrangement establishes a fund to retire a specified amount of the outstanding bonds through purchases in the market if these purchases can be made at or below a stipulated price.

- Government of Canada fixed-income securities include bonds, real return bonds, and T-bills. Provincial bonds, like Government of Canada bonds, are actually debentures because they are promises to pay and no physical assets are pledged as security. They are second in quality only to Government of Canada bonds. Municipalities typically raise capital from market sources through instalment debentures or serial bonds.
- Types of corporate fixed-income securities include first mortgage bonds, collateral trust bonds, equipment trust certificates, and subordinated debentures.
- Other types of fixed-income securities include bankers' acceptances, commercial paper, term deposits, and GICs.
- A typical bond quote includes the issuing company, the coupon rate, the maturity date, the bid and ask price, and the yield on the bond. In Canada, DBRS, Moody's, and S&P provide independent rating services for many debt securities.

Review Questions

Now that you have completed this chapter, you should be ready to answer the Chapter 6 Review Questions.

Frequently Asked Questions

If you have any questions about this chapter, you may find answers in the online Chapter 6 FAQs.

Fixed-Income Securities: Pricing and Trading

Chapter Overview

In this chapter, you will learn how to calculate the price and yield of fixed-income securities. You will also learn about interest rates on bonds, including the difference between the nominal and the real rate of return, how interest rates are depicted on a yield curve, and how they are determined according to three theoretical principles. You will then learn how and why bond prices go up or down according to certain fixed-income pricing properties. Next, you will learn about bond trading and the rules and regulations around the delivery of bonds and the settlement of transactions. Finally, you will learn how bond indexes are used by portfolio managers as performance measurement tools and to construct bond index funds.

learning objectives
content areas

1 | Perform calculations relating to bond pricing yield.	**Calculating Price and Yield of a Bond**
2 | Describe the factors determine the term structure of interest rate and shape of the yield curve	**Term Structure of Interest Rates**
3 | Explain how bond pr react to changes in inte rates, maturity, coupon, and yield	**Fundamental Bond Pricing Properties**
4 | Describe how bond trading is conducted	**Bond Market Trading**
5 | Define bond indexes how they are used in th securities industry.	**Bond Indexes**

Key Terms

Key terms are defined in the Glossary and appear in **bold** text in the chapter.

accrued interest

bearer bonds

buy side

current yield

discount rate

duration

expectations theory

inter-dealer broker

liquidity preference theory

market segmentation theory

nominal rate

present value

real rate of return

registered bonds

reinvestment risk

sell side

trade ticket

yield curve

Introduction

Before you recommend fixed-income securities to clients, you must understand the potential risks and rewards of bonds and other securities of this type. An important part of this process is knowing how bond yields and prices are determined and understanding the strong relationship between prices and prevailing interest rates.

In the most common scenario, the investor buys a bond at one price, receives a regular stream of interest payments, holds the bond to maturity, and cashes it in at face value.

However, fixed-income securities can also be bought in the secondary markets. The price that an investor pays for a particular security in the secondary market applies as much to bonds as it does to equities. Price is especially a concern for investors seeking capital gains in the bond market. Both bond prices and equity prices are affected by economic conditions and changes in interest rates, among other factors; however, they do not react in the same way.

In this chapter, we focus on the methods used to determine the fair price for a fixed-income security, as well as fixed-income pricing properties. You will also learn about the impact that various events have on the markets and on the prices of fixed-income securities.

Calculating Price and Yield of a Bond

1 | Perform calculations relating to bond pricing and yield.

The most accurate method used to determine the value of a bond is to calculate the **present value**. The present value is the amount an investor should pay today to invest in a security that offers a guaranteed sum of money on a specific date in the future.

EXAMPLE

Suppose you had the opportunity to invest money today to receive \$1,000 one year from today. Suppose also that the average current interest rate is 5%. Considering that you could invest the money today and earn 5% interest over the course of a year, the present value must be less than its future value of \$1,000.

The question, then, is how much you must invest today at 5% to achieve that future value of \$1,000. Here is a simplified way to determine this amount:

$$\text{Present Value} \times (1 + \text{Interest or Discount Rate}) = \text{Future Value}$$

$$\text{Present Value} \times 1.05 = 1{,}000$$

$$\text{Present Value} = \frac{1{,}000}{1.05} = 952.38$$

We see, therefore, that \$952.38 invested today for one year at a 5% rate of interest will grow to a future value of \$1,000.

You can verify the manual calculation on your calculator by entering: \$952.38 + 5% or \$952.38 × 1.05.

The example is simplified in that it calculates a single future value at maturity. In reality, the cash flow from a typical bond is made up of regular coupon payments and the return of the principal at maturity. Because a bond represents a series of cash flows to be received in the future, the sum of the present values of all of these future cash flows is what the bond is worth today.

The present value of a bond with coupon payments is calculated in four steps:

1. Choose the appropriate **discount rate**.
2. Calculate the present value of the income stream from the bond's coupon payments.
3. Calculate the present value of the bond's principal to be received at maturity.
4. Add these present values together to determine the bond's worth today.

The general formula used to factor in coupon payments in calculating present value is shown in Figure 7.1.

Figure 7.1 | Formula for Calculating Present Value

$$PV = \frac{C_1}{(1+r)^1} + \frac{C_2}{(1+r)^2} + \cdots + \frac{C_n + FV}{(1+r)^n}$$

Where:

PV = Present value of the bond
C = Coupon payment
r = Discount rate per period
n = Number of compounding periods to maturity
FV = Principal received at maturity (i.e., the future value or *FV*)

The math behind the calculation for present value is not intended to be cumbersome. In the next few sections, we explain how to carry out and interpret the results.

Note: You will notice that throughout the examples in this chapter, we always use a four-year, semi-annual, 9% coupon bond with a discount rate of 10%. Bond prices are often quoted using a base value of $100. We therefore use $100 as the principal of our four-year, semi-annual, 9% bond.

The Discount Rate

The discount rate is the rate at which you would discount a future value to determine the present value.

The appropriate discount rate is chosen based on the risk of the particular bond. It can be estimated based on the yields currently applicable to bonds with similar coupon, term, and credit quality. Yields are determined by the marketplace and change as market conditions change. Yields are often quoted as being equal to a Government of Canada bond with a similar term, plus a spread in basis points that reflects credit risk, liquidity, and other factors.

It is important to note that the terms *discount rate* and *yield* are often used to refer to the same thing. However, the discount rate should not be confused with the coupon rate on the bond, which determines the income to be paid to the bondholder. The coupon rate is set when the bond is issued and, unlike the yield, generally does not change.

If the bond pays interest more than once a year, the coupon payments, the compounding periods, and the discount rate must be adjusted for the number of times interest is paid each year. Most bonds pay interest twice a year, and so the following adjustments are required:

$$\text{Coupon} = (9\% \div 2) \times \$100 = 4.5\% \times \$100 = \$4.50 \text{ per period}$$

$$\text{Compounding periods} = 4 \text{ years} \times 2 \text{ payments per year} = 8 \text{ compounding periods}$$

$$\text{Discount rate} = 10\% \div 2 \text{ payments per year} = 5\% \text{ per period}$$

Calculating the Fair Price of a Bond

The fair price of a bond is the present value of the bond's principal and the present value of all coupon payments to be received over the life of the bond.

Table 7.1 shows the timing of the cash flows on the example four-year, semi-annual, 9% bond.

Table 7.1 | Cash Flow Timeline on a Four-Year, Semi-annual, 9% Bond

Year 4
C8 ($4.50) ($100)

Present Value of a Bond

Table 7.1 shows that coupon payments are made twice a year and that, at maturity, the bondholder receives the final coupon payment and the return of the principal (or the par value of the bond). By discounting these cash flows back to the present, we can solve for the present value of a bond.

The present value of a future amount to be received is calculated by dividing that future amount by (1 + interest rate) raised to the power of the number of compounding periods in the life of the bond. This method is called *discounting the cash flows* because the future cash flows are discounted to arrive at the present value.

We can carry out the calculation either by hand or by using a financial calculator, but the calculator method is much quicker and more precise.

For the four-year, semi-annual, 9% bond in our example, we can set up the formula as shown in Figure 7.2.

Figure 7.2 | Calculating Present Value of a Four-Year, Semi-Annual, 9% Bond

$$PV = \frac{4.50}{(1+0.05)^1} + \frac{4.50}{(1+0.05)^2} + \cdots + \frac{4.50 + FV}{(1+0.05)^8}$$

Calculation Note

You may be wondering how to approach calculations that involve $(1 + r)^n$. The bracketed information is read as being to the power of *n*. Therefore, if we have $(1.05)^8$, the 1.05 is raised to the power of 8. Most calculators are equipped with a y^x or y^{exp} key to simplify this calculation. Simply key in 1.05 and press the y^x or y^{exp} key, then enter 8 as the power and press the = button to find the answer: 1.4775.

---

1. Present value of the income stream

   The present value of a bond's income stream is the sum of the present values of each coupon payment. On our four-year, semi-annual, 9% bond with a par value of $100, there are eight remaining semi-annual coupon payments of $4.50 each, for a total value of $36 in coupon payments over time. The present value of each of these $4.50 coupons, added together, is the present value of the bond's income stream.

   Using a financial calculator, we can calculate the present value of the coupon payments as follows:

   1. Type 8, then press N.
   2. Type 5, then press I/Y.
   3. Type 4.50, then press PMT.
   4. Type 0, then press FV (to tell the calculator you are not interested in the principal).
   5. Press COMP, then press PV (some financial calculator models use the COMP button while others may use CPT).

   Answer: –29.0845

Did You Know?

When using the time value of money functions on your calculator, a negative value denotes an outflow of money, whereas a positive value denotes an inflow of money.

In this case, –29.0845 denotes that the investor must pay $29.0845 (outflow) to purchase the series of eight coupon payments of $4.50 (inflow). Those positive and negative signs are how the calculator keeps track of money flowing into and out of the investor’s pocket.

This calculation tells us that the value of the stream of eight coupon payments totalling $36 is worth $29.08 today.

2. Present value of the principal

Because the bond’s principal represents a single cash flow to be received in the future, we can calculate the present value of the principal of our bond as follows:

1. Type 8, then press N.
2. Type 5, then press I/Y.
3. Type 0, then press PMT (to tell the calculator you are not interested in the coupons).
4. Type 100, then press FV.
5. Press COMP, then press PV.

Answer: –67.6839

The present value of the principal is approximately $67.68. This tells us that if you were to invest $67.68 at a semi-annual rate of 5% today, you would receive $100 in four years. You can verify this on your calculator by entering $67.6839 + 5% + 5% + 5% + 5% + 5% + 5% + 5% + 5%.

3. Present value of the bond

The fair price for a bond is the sum of its two sources of value: the present value of its coupons and the present value of its principal.

In the example above, the coupons are worth $29.08 and the principal is worth $67.68. Therefore, at a discount rate of 10%, this bond has a present value of $96.77 (calculated as $29.0844 + $67.6839) today.

We can also carry out the calculation for the present value of the bond in one easy step using a financial calculator:

1. Type 8, then press N.
2. Type 5, then press I/Y.
3. Type 4.50, then press PMT.
4. Type 100, then press FV.
5. Press COMP, then press PV.

Answer: –96.7684

The value of $96.77 indicates the price at which the bond will be quoted for trading in the secondary market. In other words, this is the bond’s fair value, given current market conditions.

Thus, the value of a bond is the sum of what its coupons are worth today, plus what its principal is worth today, based on an appropriate discount rate that reflects the risks of that particular bond. The appropriate discount rate changes with changing economic conditions and reflects the yield that investors expect.

The financial calculator simplifies the present value calculations, although knowing how to carry out the calculations manually is important. We include those step-by-step calculations in Figure 7.3 so that you can gain an appreciation of what is involved at each step.

Figure 7.3 | Calculating the Present Value of a Bond

Step 1: Present Value of the Principal

Because the bond's principal represents a single cash flow to be received in the future, we can calculate the present value of the principal of a four-year, semi-annual bond with a par value of $100 as follows:

$$PV = \frac{FV}{(1+r)^n} = \frac{100}{(1+0.05)^8} = \frac{100}{1.47746} = 67.6839$$

Therefore, the present value of the principal is $67.68.

Step 2—Method 1: Present Value of the Income Stream

We can calculate the present value of the first coupon payment using the same formula:

$$PV = \frac{4.50}{(1+0.05)^1} = \frac{4.50}{1.05} = 4.2857$$

Therefore, the present value of the first coupon to be received six months from now is approximately $4.29. You can verify this with your calculator by entering $4.2857 + 5% = $4.50.

In the same example, the present value of the second coupon is calculated as follows:

$$PV = \frac{4.50}{(1+0.05)^2} = \frac{4.50}{1.1025} = 4.0816$$

Therefore, the present value of the coupon to be received a year from now is approximately $4.08. You can verify this with your calculator by entering $4.0816 + 5% + 5% = $4.50.

Repeat this process for each of the coupon payments to be received, and add the present values together to obtain the present value of the income stream. In this example, the result is $29.08 (calculated as $4.29 + $4.08 + $3.89 + $3.70 + $3.53 + $3.36 + $3.20 + $3.05).

Step 2—Method 2: Present Value of the Income Stream

Step 3: Present Value of the Bond

The fair price for a bond is the sum of its two sources of value: the present value of its principal and the present value of its coupons. Therefore, at a discount rate of 10%, this bond has a value today of $96.77 (calculated as $29.0844 + $67.6839).

Calculating the Yield on a Treasury Bill

A Treasury bill (T-bill) is a very short-term security that trades at a discount and matures at par. No interest is paid in the interim. Instead, the return is generated from the difference between the purchase price and the sale price (if sold before maturity) or maturity value (if held to maturity). For tax purposes, the investor's earnings from the T-bill are treated as interest income. A simple formula for calculating this yield is shown in Figure 7.4.

Figure 7.4 | Calculating the Yield on a Treasury Bill

$$\text{Yield} = \frac{100 - \text{Price}}{\text{Price}} \times \frac{365}{\text{Term}} \times 100$$

EXAMPLE

The yield on an 89-day T-bill purchased for a price of 99.5 is calculated as follows:

$$\text{Yield} = \frac{100 - 99.5}{99.5} \times \frac{365}{89} \times 100 = \frac{0.5}{99.5} \times \frac{365}{89} \times 100 = 2.061\%$$

Calculating the Current Yield on a Bond

Current yield looks only at cash flows and the current market price of an investment, not at the amount that was originally invested. We can calculate the current yield of any investment, whether it is a bond or a stock, using the formula shown in Figure 7.5.

Figure 7.5 | Calculating the Current Yield on a Bond

$$\text{Current Yield} = \frac{\text{Annual Cash Flow}}{\text{Current Market Price}} \times 100$$

EXAMPLE

The current yield on a four-year, semi-annual, 9% bond, trading at a price of 96.77 is calculated as follows:

$$\text{Yield} = \frac{9.00}{96.77} \times 100 = 9.30\%$$

Calculating the Yield to Maturity on a Bond

The most popular measure of yield in the bond market is yield to maturity (YTM). This measure shows the total return you would expect to earn over the life of a bond starting today, assuming you are able to reinvest each coupon payment you receive at the same YTM that existed at the time you purchased the bond.

The YTM takes into account the current market price, its term to maturity, the par value to be received at maturity, and the coupon rate. This calculation involves finding the implied interest rate (*r*) in the present value formula (shown in Figure 7.1), but where *PV*, rather than *r*, is known.

The YTM calculation makes the assumption that the investor will be repaid the par value of the investment at maturity. (In contrast, current yield is calculated as the coupon income divided by current price.)

Therefore, YTM not only reflects the investor's return in the form of coupon income; it also includes any capital gain from purchasing the bond at a discount and receiving par at maturity, or any capital loss from purchasing the bond at a premium and receiving par at maturity.

FOR INFORMATION ONLY

Why Would an Investor Buy a Bond at a Premium if It Guarantees a Capital Loss?

If you are new to investing in bonds, you may wonder why anyone would buy a bond at a premium that will produce a capital loss if held to maturity. In fact, there is more to a bond than the purchase price. Although the capital loss is guaranteed, you should not overlook the stream of coupon payments and their reinvestment potential.

For example, consider a bond that costs $103 and matures in four years. The bond has a 7% coupon rate.

If you pay $103 and hold the bond to maturity, you will end up with a $3 capital loss. However, over the course of four years, you will also receive the following payments from the issuer:

$3.50 + $3.50 + $3.50 + $3.50 + $3.50 + $3.50 + $3.50 + $3.50 + $100 = $128

Also, each time you receive a regular coupon payment of $3.50, you have the opportunity to invest that money in the market and earn a return on it.

Manually calculating YTM is difficult; the task is made easier with a financial calculator.

EXAMPLE

With a four-year, semi-annual, 9% bond trading at a price of 96.77, we can find the semi-annual YTM as follows:

1. Type 8, then press N.
2. Type 4.50, press PMT.
3. Type 96.77, then press +/–, then press PV. (The +/– sign in front of 96.77 denotes an inflow or outflow of funds from the investor.)
4. Type 100, then press FV.
5. Press COMP, then press I/Y.

Answer: 4.9997 (rounded to 5)

Therefore, the semi-annual YTM on this bond is 5.0%. The annual YTM is 10% (calculated as 5% × 2), which makes sense because the bond is trading at a discount to par. If you buy this bond today at the price of $96.77 and hold it to maturity, you will receive eight payments of $4.50 plus $100 at maturity. The YTM calculation factors in the $3.23 gain on the bond ($100 – $96.77), the coupon income, plus the reinvestment of the coupon income at this YTM.

Figure 7.6 shows how to manually calculate the approximate YTM. (A financial calculator produces slightly more accurate results.)

Did You Know?

The manual method of calculating YTM produces only an approximate yield. However, the results from a manual calculation are usually very similar to the results you would get with a financial calculator.

Figure 7.6 | Approximate Yield to Maturity—Manual Calculation

$$AYTM = \frac{\text{Interest Income} \pm \text{Price Change per Compounding Period}}{(\text{Purchase Price} + \text{Par Value}) \div 2} \times 100$$

We use +/- in the formula to show that you can buy a bond at a price above or below par. Let's assume that you buy a bond at a discount to par—at a price of 92, for example—and hold it to maturity. At maturity, the bond matures at par and you realize a gain on the investment. In the formula, you would *add* this price appreciation to the interest income. The opposite holds if you buy a bond at a premium—at a price of 105, for example—and hold it to maturity. In our formula, you would *subtract* the price decrease from the interest income.

EXAMPLE

On the four-year, semi-annual, 9% bond, trading at a price of 96.77 that matures at 100, the semi-annual interest or coupon income is $4.50.

What is the annual price change on this bond (based on $100 par)?

The present value of the bond is 96.77 and will mature at 100. Therefore, it will increase in value over the remaining life of the bond by $3.23. Because there are eight compounding periods remaining in this bond's term, the bond generates a gain in price of $0.4038 per period over the remaining eight periods ($3.23 ÷ 8).

What is the average price on this bond (based on $100 par)? The purchase price is $96.77. The redemption or maturity value is $100. The average price is therefore $98.385, calculated as (96.77 + 100) ÷ 2.

The semi-annual approximate YTM on this bond is calculated as follows:

$$\frac{\$4.50 + \$0.4038}{(96.77 + 100) \div 2} \times 100 = \frac{\$4.9038}{98.35} \times 100 = 4.9842\%$$

The annual approximate YTM is 9.9684% (calculated as 4.9842% × 2). Notice that this result is very close to the YTM found using a financial calculator, although the calculator produces a more precise figure.

When you buy a bond, the bond quote includes the price, the maturity date, the coupon rate (which tells how much income you will receive each year), and the YTM.

EXAMPLE

Yield to Maturity [illegible]
X Corp. [illegible]

Note: Yield to maturity is calculated as 10 N, –80 PV, 3.5 PMT, 100 FV, COMP I/Y × 2.

All of this information is important; however, the YTM is the most important measure. In general, the YTM is an estimate of the average rate of return earned on a bond if it is bought today and held to maturity. To earn this rate of return, however, it is assumed that all coupon payments are reinvested in securities at a rate equal to the prevailing YTM at the time of purchase.

In our example above, the bondholder will realize a return of 12.50% over the term of the bond if it is held to maturity and if the coupon payments are reinvested at this YTM. From this example, you can see that it is not just coupon income that contributes to the yield of the investment. The difference between the purchase price of $80 and the maturity price of $100 in five years also contributes to the overall YTM, as does the reinvestment of coupon payments.

Did You Know?

In most cases, the current yield, approximate YTM and the YTM will differ because they apply different formulas based on different assumptions. However, there is one instance in which the three measures will be equal: when the bond trades at par, the current yield, approximate YTM, and the YTM will be the same.

REINVESTMENT RISK

The YTM provides us with a good estimate of the return on a bond. However, you should keep in mind that the future trend in market rates could affect the true return on the bond, so it may differ from the YTM calculation. Because interest rates fluctuate, the interest rate prevailing at the time of purchase is unlikely to be the same as the interest rate prevailing at the time the investor reinvests cash flows from each coupon payment. The longer the term to maturity, the less likely it is that interest rates will remain constant over the term. The risk that the coupons will earn a return at a lower overall rate than the rate that prevailed at the time that the bond was purchased is called **reinvestment risk**.

If all coupon payments are reinvested at a rate that is higher on average than the bond's YTM at the time of purchase, the overall return on the bond will be higher than the YTM quoted at the time that the bond was purchased. In this case, the YTM at the time of purchase would be understated.

If, on the other hand, coupon payments are reinvested at a rate that is lower on average than the bond's YTM at the time of purchase, the overall return on the bond will be lower than the YTM quoted at the time that the bond was purchased. In this case, the YTM at the time of purchase would be overstated.

Only a zero-coupon bond has no reinvestment risk because there are no coupon cash flows to reinvest before maturity. Instead, these bonds are purchased at a discount from their face value. The price paid takes into account the compounded rate of return that would have been received had there been coupons.

Calculating Bond Yield and Price

Can you calculate the yield on a bond? How well do you understand bond pricing? *Complete the online learning activity to assess your knowledge*.

Term Structure of Interest Rates

2 | Describe the factors that determine the term structure of interest rates and shape of the yield curve.

The market forces of supply and demand can affect the trading prices of bonds, and therefore their YTM. For example, if there is excess demand for a bond, the buying pressure will push the bond's price higher, and therefore the YTM will fall. Another major driving force of a bond's price is market interest rates. It is important, therefore, that you understand the factors that determine two things:

- The general level of interest rates at any particular time
- The level of interest rates at different terms to maturity

Several theories have been proposed to explain why interest rates for different terms vary and how these variances create different results.

In a general sense, interest rates are simply the result of the interaction between those who want to borrow funds and those who want to lend funds. The Fisher Effect is a well-known theory that explains how interest rates are determined. This theory, named after economist Irving Fisher, is based on the interaction between the inflation rate, the nominal interest rate, and the real interest rate.

The Real Rate of Return

The rate of return that a bond (or any investment) offers is made up of two components:

- The **real rate of return**
- The inflation rate

Because inflation reduces the value of a dollar, the return that is received, called the **nominal rate**, must be reduced by the inflation rate to arrive at the real rate of return.

Did You Know?

The real rate of return is determined by the level of funds supplied by investors and the demand for loans by businesses. The supply of funds tends to rise when real rates are high because investors are more likely to earn higher returns on the funds they lend. On the other hand, the demand for loans tends to rise when real rates are low because businesses that borrow to invest in their companies are more likely to earn returns that are higher than the costs of borrowing.

The nominal rate for loans is made up of the real rate, as established by supply and demand, plus the expected inflation rate, as shown in Figure 7.7.

Figure 7.7 | Calculating the Nominal Rate

$$\text{Nominal Rate} = \text{Real Rate} + \text{Inflation Rate}$$

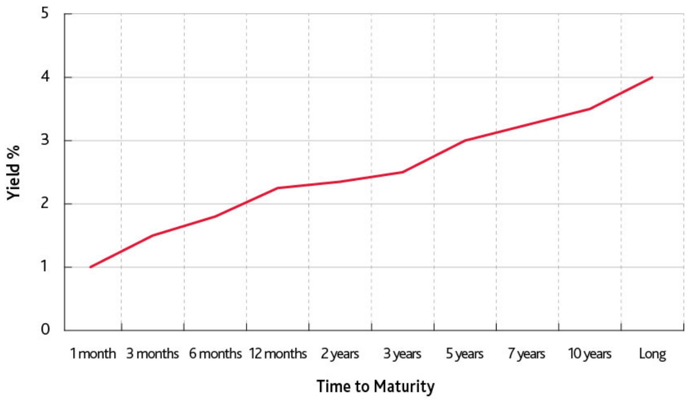
Two factors affect forecasts for the real rate:

- The real interest rate rises and falls throughout the business cycle. During a recession, the real rate falls along with demand for funds. When rates fall far enough, however, the demand starts to rise again. As the economy expands, demand for funds continues to grow and the real rate rises in tandem.
- An unexpected change in the inflation rate also affects the real rate. Investors who lend money generally demand an interest rate that includes their expectations for inflation, thereby ensuring a satisfactory real rate. If the inflation rate is higher than expected, the investor's real rate of return will be lower than expected.

The Yield Curve

Just as bond prices and yields fluctuate, so does the relationship between short-term and long-term bond yields. This relationship between bonds of varying terms to maturity is referred to as the term structure of interest rates. The structure can be easily plotted on a graph for similar long-term and short-term bonds to show a continually changing line called the **yield curve**. A hypothetical yield curve for Government of Canada bonds is depicted in Figure 7.8. This upward-sloping curve is an example of a normal yield curve.

Figure 7.8 | Short- and Long-term Government of Canada Security Yields



The yield curve indicates the yield at a specific point in time for bonds of a similar type that have the same credit quality but different terms to maturity. In Figure 7.8, for example, very short-term Government of Canada bonds show a yield of 1%, whereas long-term bonds show yields around 4%.

Three theories that attempt explain the shape of the yield curve are the **expectations theory**, the **liquidity preference theory**, and the **market segmentation theory**.

EXPECTATIONS THEORY

The expectations theory says that current long-term interest rates foreshadow future short-term rates. According to this theory, investors buying a single long-term bond should expect to earn the same amount of interest as they would buying two short-term bonds of equal combined **duration**. The theory implies that the shape of the yield curve indicates investor expectations about future interest rates.

To illustrate, an investor who wants to invest money in the fixed-income market for two years has at least three choices:

- Buy a two-year bond.
- Buy a one-year bond, and then buy another one-year bond, when the first one matures.
- Buy a six-month bond, and then buy three more six-month bonds at intervals, as each bond matures.

The expectations theory holds that, in an efficient market, each choice will be equally attractive. Accordingly, the two-year interest rate must be equal to two successive and consecutive one-year rates, and the one-year rate must be an average of two consecutive six-month rates.

EXAMPLE

You are interested in a two-year bond that has a current rate of 5%. Your return on investment in the two-year bond at maturity would be 10.25%, which is calculated as $1.05 \times 1.05 = 1.1025$, or $1.05^2 = 1.1025$.

You are also interested in a one-year rate for the bond that is currently 4%. You plan to roll over (or reinvest) your investment into another one-year bond a year later. What will you need the second year's one-year bond return to be so that the two consecutive one-year bonds produce the same return as the two-year bond? This statement is represented in the following balanced equation:

$$\text{2 Year Return} = \text{1 Year Return (Year 1)} \times \text{1 Year Return (Year 2)}$$

The answer is found in the following calculation:

$$(1 + 0.05)^2 = (1 + 0.04) \times (1 + r)$$

$$(1 + r) = \frac{1.1025}{1.04} = 1.06009$$

$$r = 0.06009 = 6\%$$

According to this calculation, with one-year rates at 4% and two-year rates at 5%, rates on one-year bonds are expected to increase from 4% to 6% a year from now. Assuming this expectation is correct, you will achieve the same result whether you buy a two-year bond today or two one-year bonds consecutively.

The expectations theory holds that an upward sloping yield curve indicates an expectation of higher rates in the future, whereas a downward sloping curve indicates that rates are expected to fall. A humped curve indicates that rates are expected to first rise and then fall. The yield curve is thus said to reflect a market consensus of expected future interest rates. The yield curve in Figure 7.8, for example, which slopes upward from left to right, indicates a market consensus that investors expect interest rates to rise.

LIQUIDITY PREFERENCE THEORY

According to the liquidity preference theory, investors prefer short-term bonds because they are more liquid and less volatile in price. An investor who prefers liquidity will venture into longer-term bonds only if there is sufficient additional compensation for assuming the additional risks of lower liquidity and increased price volatility.

According to this theory, the upward sloping yield curve in Figure 7.8 reflects additional return for assuming additional risk. The simplicity of this theory may be appealing, but it does not explain a downward sloping yield curve.

MARKET SEGMENTATION THEORY

The various institutional players in the fixed-income arena each concentrate their efforts in a specific term sector. For example, the major chartered banks tend to invest in the short-term market, whereas life insurance companies operate mainly in the long-term bond sector because of their long investment horizon.

The market segmentation theory postulates that the yield curve represents the supply of and demand for bonds of various terms, which are primarily influenced by the bigger players in each sector. This theory can explain all types of yield curves, including a normal, upward-sloping curve, an inverted (downward sloping) curve, and a humped curve.

Yield Curve

Three popular theories explain the structure of interest rates on the yield curve: the *expectations* theory, the *liquidity preference* theory, and the *market segmentation* theory. Can you explain the concept behind each theory? *Complete the online learning activity to assess your knowledge*.

Fundamental Bond Pricing Properties

3 | Explain how bond prices react to changes in interest rates, maturity, coupon, and yield.

Earlier, in our discussion of present value, we explained how to determine the appropriate price to pay for a bond or other fixed-income security. Another important thing to know is where that price is headed. Current interest rate levels and your understanding of term structure may help you forecast the general direction of bond prices. However, you should also understand the specific features of an individual bond that determine how that particular bond will react to interest rate changes.

We now turn our attention to several tables showing calculations. The yields in these tables are calculated using precise present value techniques, including semi-annual compounding and full reinvestment of all coupons at the prevailing yield. You can duplicate the price information with a financial calculator.

The Relationship between Bond Prices and Interest Rates

The most important bond pricing relationship to understand is the inverse relationship between bond prices and bond yields, which rise or fall in tandem with interest rates. In fact, the terms *interest rate* and *bond yield* are often used interchangeably, with both meaning a rate of return on an investment. Therefore, as interest rates rise, bond yields also rise but bond prices fall; when interest rates fall, bond yields also fall but bond prices rise.

Table 7.2 shows the inverse relationship of bond prices and interest rates (and therefore bond yields).

Table 7.2 | Effect of an Interest Rate Change on the Price of a 3% Five-Year Bond

Yield Price % Change Percent Change	
3%	100.00
1% Increase (to 4%)	95.51 +33.33 –4.49
1% Decrease (to 2%)	104.74 –33.33 +4.74

* This number is calculated as follows: (Ending Value – Beginning Value) ÷ Beginning Value × 100, or (0.04 – 0.03) ÷ 0.03 × 100 = 33.33%.

Remember that the coupon rate doesn’t change over the life of the bond; the bondholder continues to receive the established coupon rate regardless of whether the bond price goes up or down. When interest rates rise and the bond yield rises to keep pace, the only way to create additional yield beyond what the coupon rate already provides is to lower the price of the bond.

For example, Table 7.2 shows that when the yield of a 3% bond rises to 4%, the price of the bond must drop from 100 to 95.51 to achieve a yield of 4%. New buyers paying 95.51 would receive a combination of interest income ($3 per $100 of par value) and a gain on the price of the bond (based on the difference between the purchase price and eventual maturity price of par). The overall yield thereby increases to 4%.

Conversely, when interest rates fall and the bond yield falls to 2% to keep pace, the only way to reduce the yield to 2% is to increase the price of the bond from 100 to 104.74. New buyers paying 104.74 would receive a combination of 3% interest income and a loss on the price of the bond, thereby reducing the overall yield to 2%.

The Impact of Maturity

The next important relationship to recognize is that longer-term bonds are more volatile in price than shorter-term bonds. For example, Table 7.3 compares a 3%, five-year, semi-annual coupon bond with a 3%, 10-year, semi-annual coupon bond. Note that when interest rates are 3%, both bonds are priced at par to yield 3%.

Table 7.3 | The Effect of Interest Rate Changes on Bonds of Different Terms

3% FIVE-YEAR BOND

Interest Rate (Yield)	Price	% Change
3%	100.00	
1% Increase (to 4%)	95.51	–4.49
1% Decrease (to 2%)	104.74	+4.74

3% 10-YEAR BOND

Interest Rate (Yield)	Price	% Change
3%	100.00	
1% Increase (to 4%)	91.82	–8.18
1% Decrease (to 2%)	109.02	+9.02

* This number is calculated as follows: (Ending Value – Beginning Value) ÷ Beginning Value × 100, or (91.82 – 100) ÷ 100 × 100 = –8.18.

If interest rates rise to the point at which each bond yields 4%, both the five-year and the 10-year bond will drop in price to different degrees: the five-year bond drops 4.49%, and the 10-year bond drops 8.18%. A similar pattern occurs when interest rates, and therefore yields, drop. Uncertainty about the markets and interest rates increases as we forecast farther into the future. Therefore, the longer the term of the bond, the more volatile its price will be. The longer-term bond will rise more sharply (9.02% if yields drop to 2%) than the shorter-term bond (which rises only 4.74%).

As bonds approach maturity over the years, they become less volatile. For example, a bond is originally issued with a 10-year maturity; seven years later, it has only a three-year term. As such, it will be priced as, and will trade as, a three-year bond at that time.

The Impact of the Coupon

Our next pricing relationship states that lower-coupon bonds are more volatile in price percentage change than high-coupon bonds. Table 7.4 compares a 3%, five-year, semi-annual coupon bond with a 2%, five-year, semi-annual coupon bond. All other factors are assumed to be constant, such as credit quality and liquidity. Therefore, the only difference between the two bonds is the coupon rate. Market rates start at 3%.

Table 7.4 | The Effect of Interest Rate Changes on Bonds with Different Coupons

3% FIVE-YEAR BOND

Interest Rate (Yield)	Price	% Change
3%	100.00	0.00
1% Increase (to 4%)	95.51	–4.49
1% Decrease (to 2%)	104.74	+4.74

2% FIVE-YEAR BOND			
Yield	**Price**	**Price Change**	**% Change**
3%	95.39	0	
1% Increase (to 4%)	91.02	−4.37	−4.58
1% Decrease (to 2%)	100.00	+4.61	+4.83

When yields rise, both bonds drop in price; however, the lower coupon bond drops more (4.58%) than the higher-coupon bond (4.49%). This difference is significant when there is a considerable difference between coupons or when large sums of money are invested.

The Impact of Yield Changes

Our last bond pricing relationship states that the relative yield change is more important than the absolute yield change. For example, a drop in yield from 12% to 10% will have a smaller impact on a bond's price than a drop in yield from 4% to 2%. Although both represent a drop of 200 basis points, the former is a 17% change in yield, and the latter is a 50% change in yield. Therefore, bond prices are more volatile when interest rates are low.

On another note, when the yield rises or falls by the same percentage, the price of a bond is impacted more by the fall in yield. For example, Table 7.5 demonstrates that a 1% drop in yield leads to a greater change in price than a 1% rise in yield. The price rises by 4.74% in the first scenario and falls by 4.49% in the second.

Table 7.5 | Price Changes Relative to Changes in Yield

3% FIVE-YEAR BOND			
Yield	**Price**	**Price Change**	**% Change**
3%	100.00	0	
1% Increase (to 4%)	95.51	−4.49	−4.49
1% Decrease (to 2%)	104.74	+4.74	+4.74

Duration as a Measure of Bond Price Volatility

So far in this chapter, we discussed the following relationships:

- The value of a bond changes in the opposite direction to a change in interest rates: as interest rates rise, bond prices fall; as interest rates fall, bond prices rise.
- Given two bonds with the same term to maturity and the same yield, the bond with the higher coupon is usually less volatile in price than the bond with the lower coupon.
- Given two bonds with the same coupon rate and same yield, the bond with the longer term to maturity is usually more volatile in price than the bond with the shorter term to maturity.

Given these relationships, it is fairly easy to compare bonds with the same term to maturity or the same coupon. But how do we compare bonds with different coupon rates and different terms to maturity? For example, how can we determine whether a bond with a high coupon and a long term will be more or less volatile than a bond with a lower coupon and a shorter term?

A change in interest rates affects the price of different bonds differently, depending on features such as coupons, maturities, and protective covenants. In fact, a change in interest rates is one of the main risks faced by investors holding fixed-income securities. To make sound investment decisions, you must be able to determine the impact of interest rate changes on the prices of different types of bonds.

The calculation that combines the impact of both the coupon rate and the term to maturity is called duration. Duration is a measure of the sensitivity of a bond's price to changes in interest rates. It is defined as the approximate percentage change in the price or value of a bond for a 1% change in interest rates. The higher the duration of the bond, the more it will react to a change in interest rates.

When duration is known, that value helps investors determine the bond's, or the bond fund's, *volatility*—the amount of change in price as interest rates change. In this way, a single duration figure for each bond can be compared directly with the duration of every other bond.

EXAMPLE

You are interested in buying a DEC Corp. bond priced at 105 with 12 years left to maturity, but you are concerned that interest rates are going to rise by 1% over the next year. The duration of the bond is 10, which means that its price will change by approximately 10% for each 1% change in interest rates. You determine that the price of the bond could drop from 105 to 94.50, if your expectations about the interest rate change are correct. This figure is calculated as follows: 105 – (10% × 105) = 94.50.

A higher duration translates into a higher percentage price change for a given change in yield. To earn the greatest return, you should therefore invest in bonds with a higher duration when you expect interest rates to decline. Conversely, when interest rates are expected to rise, you should invest in bonds with low duration to protect a bond portfolio from a dramatic decline.

Table 7.6 shows the impact that interest rate changes have on bonds with different durations and different rate changes. As the table shows, the same interest rate change has a greater impact on the price of Bond A compared with the price change on Bond B.

Table 7.6 | Impact of an Interest Rate Change on Bonds with Different Durations

	Bond A: Duration = 10	**Bond B: Duration = 5**
Current price	$1,000	$1,000
Price when interest rates rise by 1%	$900 (−10%)	$950 (−5%)
Price when interest rates fall by 0.50%	$1,050 (+5%)	$1,025 (+2.5%)*

* We are not constrained to 1% interest rate changes. As long as the duration of the bond is known, the effect of any range of interest rate changes can be determined. The change in price for Bond B with a duration of 5 and a 0.50% interest rate drop is 2.5% (calculated as 5 × 0.50%).

Dive Deeper

Calculating a bond's duration is a complicated process, and the value can also change over longer holding periods and larger interest rate swings. Therefore, we do not show the formula for calculating duration in this course. The concept is explained more fully in three CSI courses: *Investment Management Techniques* (IMT), *Portfolio Management Techniques* (PMT), and *Wealth Management Essentials* (WME).

Bond Market Trading

4 | Describe how bond trading is conducted.

Fixed-income trading activities in the investment banking business take place in two separate areas of operation: the **sell side** and the **buy side**. The two sides sometimes operate out of separate institutions, but some large investment banks encompass both a sell-side desk and a buy-side desk.

The Sell Side

The sell side of fixed-income trading is the investment dealer side. Sell-side institutions (or divisions) are concerned with the trading (i.e., the buying and selling) of investment products for their own accounts.

Sell-side services include everything related to creating, producing, distributing, researching, marketing, and trading fixed-income products.

Most medium-to-large sell-side firms divide fixed-income duties into three primary occupational roles:

- **Investment banker** Investment bankers help their clients to structure new debt issues and bring these new issues to the primary market. Their clients are firms that need to raise funds for working capital and to fund asset acquisitions.
- **Trader** Traders trade securities that exist in the secondary market. They typically trade on a proprietary basis.
- **Sales representative** Sales representatives market new (primary) and existing (secondary) products, conduct research, and provide market analysis, credit analysis, and commentary. They also take client orders, which are then relayed to traders for pricing.

The Buy Side

The buy side of fixed-income trading is the investment management side. Buy-side institutions (or divisions) are concerned with asset management and are typically engaged in the buying and holding of securities on behalf of their institutional clients. Their clients include entities such as mutual funds, insurance companies, and pension funds.

Most buy-side firms divide fixed-income investment management duties into two primary occupational roles:

- Portfolio manager
- Trader

We will discuss the subject of institutional clients more fully in the next volume of this course, the Canadian Securities Course (CSC) Volume II.

Buying Bonds through an Investment Dealer

The bond-trading approach of investment advisors acting on behalf of their clients varies according to the bond-trading capacity of their firm.

Trading in Firms with a Large Institutional Dealing Desk

In firms with a large institutional dealing desk, investment advisors are typically served by a retail trading desk. The role of the retail desk is in many ways similar to that of the institutional sales desk. Its primary function is to help the advisors by sourcing products and providing market commentary.

The advantage of dealing within a larger firm is the access it provides to the wide range of securities in its inventory. Typically, each firm has a proprietary trading system linked directly to its inventory, which allows for automatic execution of trades once the advisor enters them into the system. Most trades take place using the system, with no need for the advisor to contact the retail trading desk by phone. For large trades and some illiquid securities, however, auto-execution is not normally available, and trades must be executed over the phone.

Trading in Firms without a Large Institutional Dealing Desk

In firms without a large institutional dealing desk, investment advisors are served by a trading desk as the source of product. Without a large internal institutional inventory to draw on, the trading desk must build its own inventory of products. It also sources products that it does not own from other dealers.

Role of Inter-Dealer Brokers

Inter-dealer brokers are participants in the wholesale bond market (i.e., the bond market between the institutional buy side and sell side). These brokers act solely as agents, bringing together institutional buyers and sellers in matching trades (rather than the institutions dealing directly with one another). In the process of doing so, they perform price discovery, which refers to determining the correct price of a security by studying the demand and supply in the market. They also perform trade execution, clearing, and settlement. In some cases, they also provide public transparency of prices.

In some respects, inter-dealer brokers perform a similar function to that of a market exchange. In Canada, a significant amount of fixed-income trading volumes flow through these brokers. In some cases, a key advantage the inter-dealer broker provides for institutional clients is anonymity. For example, assume that you are holding a large fixed-income position at a loss that you want to sell. An inter-dealer broker might be able to help you gradually sell your position to other institutions, thus helping to prevent other market participants from discovering your position and trading against it.

Mechanics of the Trade

All non-electronic trades carried out between the investment advisor and the trader are consummated over the phone. As such, they carry the legal responsibility of a full commercial agreement or commitment. The calls are recorded, and all parties use key words and clear language to communicate.

When a trader and the advisor commit to a trade, one party agrees to deliver the full amount of the bonds that were sold on the settlement date, either from the trading book or from the client’s account. The other side agrees to make payment in full on the settlement date, again either within the trading book or from the client’s account.

The Trade Ticket

The **trade ticket** is an electronic confirmation sent through secure, proprietary systems. It contains the following information:

- Specific details of the counterparties to the trade, including the name and address of the investment advisor's employer (the investment dealer holding the client's account on its books) and the name and account number of the client (*Note:* Retail trade tickets are usually written from the perspective of the client; therefore, a *buy ticket* means that the trading desk is selling to the client.)
- Full identification of the bond, including the issuer's name, the maturity date, and the coupon
- The bond's Committee on Uniform Security Identification Procedure (CUSIP), or other electronic settlement identification number (*Note:* The CUSIP number is an alphanumeric code used to identify all securities in North America. This system has been used since 1964 to facilitate the clearing and settlement of trades.)
- The nominal, par, or face amount of the transaction
- The price, and often the yield
- The settlement date
- The name of the custodian where the trade will settle
- The total settlement amount, sometimes with the amount of accrued interest shown separately

Clearing and Settlement

When a securities transaction has been confirmed, the change in legal ownership is effective immediately; however, payment for purchased securities does not have to be made until sometime later. The securities do not have to be delivered until the end of what is called the *settlement period*, when payment is made. The length of the settlement period varies depending on the type of security.

T-bills settle on the day of the transaction. Other securities, such as bonds, debentures, certificates of indebtedness, preferred shares, and common shares settle on the second clearing day after the transaction takes place.

Over time, the recognition of ownership of debt securities has taken on different forms. Table 7.7 describes the different methods in which debt securities have been issued.

Table 7.7 | Fixed-Income Securities Ownership

Ownership	Characteristics
Bearer bonds	[illegible] certificates, and detachable coupons [illegible] individual principal payment. [illegible] the coupon and submit it to a bank or other financial institution to receive payment on the interest payment date. The same process is followed for the residual principal, when due. Ownership is signified by physical possession. Historically, bond certificates were a concern because they could be sold by anyone who had physical possession, whether or not the seller was considered the rightful owner. As an added protection from theft, other methods of registration were sought. Some (though not many) **bearer bonds** still exist today.
Registered bonds	[illegible] bear the name of the registered owner and can be transferred only when the owner signs the back of the certificate. Coupon payments are mailed to the registered owner. The added layer of protection through registration solved the issue of theft and loss of certificates. However, the evolution of the bond market led to demand for greater liquidity, as well as cheaper and faster ways to bring issues to the market.
Bonds registered in book-based format	[illegible] electronic record-keeping system used by depositories that keep track of ownership and settlement of securities transactions. In Canada, the national provider of these services is the CDS Clearing and Depository Services Inc. Most bonds today are issued in a book-based format, with depository, trade clearing, and settlement services provided by participating clearing providers.

Calculating Accrued Interest

Most bonds pay interest twice a year, on the same month and day as the maturity date, and again exactly six months later. For example, if a bond's maturity date is February 15, 2025, interest will be paid every February 15 and every August 15 until maturity. Some Eurobonds pay annually, and some provincial and corporate bonds pay monthly.

It is possible, however, to purchase bonds on almost any day. Theoretically, you could purchase the above bond on August 1 of any year, hold it for two weeks, and receive a full six months' interest. The previous bondholder, on the other hand, may have held the bond for five and a half months and received no interest. To ensure that the transaction between buyer and seller is equitable, the buyer pays accrued interest to the seller at the time of the purchase. **Accrued interest** is the amount of interest built up during the previous holding period.

Interest accrues from the day after the previous interest payment date up to and including the day of settlement. The client who buys a bond pays the purchase price plus the interest that has accumulated since the last interest date. This interest is regained if the bond is held until the next interest payment date. If it is sold in the meantime, the new buyer pays accrued interest to the current seller.

The accrued interest amount is found by using the following formula:

$$\text{Par Amount} \times \frac{\text{Coupon Rate}}{100} \times \frac{\text{Time Period}}{365} = \text{Accrued Interest}$$

The amount is based on the par amount purchased or sold. The bond may have been purchased at a premium or a discount, but interest is always based on par value. The rate at which interest accrues is the coupon rate of the bond, not its yield.

EXAMPLE

You purchase an 8% Government of Canada bond, due to mature on March 15, 2025, with a principal amount of $200,000. You purchase the bond on Wednesday, May 7 of this year, and the last coupon was paid on March 15 of this year. March 16 is therefore the first day of accrued interest. The settlement date for this transaction is May 9 (the second clearing day after the transaction took place). The number of days of accrued interest for this transaction falls between March 15 and May 9, as follows:

March 16–31	16 days
April	30 days
May	9 days
Total	**55 days**

Notes:

a. Include March 16 and May 9, but not March 15.

b. If the year is a leap year, the seller is entitled to an extra day's accrued interest in February. Nevertheless, the practice is to base the interest calculation on a 365-day year.

Accrued interest on this bond is calculated as follows:

$$200{,}000 \times \frac{8.00}{100} \times \frac{55}{365} = 2{,}410.96$$

Because of the variation in the number of days in a calendar month, the calculation of accrued interest can result in an amount greater than half a year's interest payment. In such cases, accrued interest is calculated on the basis of the full amount of the coupon, less one or two days, as the case may be.

The amount of accrued interest owed to a seller or payable by a purchaser is shown on the confirmation contract that each party receives.

Accrued Interest

When a bond is bought or sold on the secondary market, part of the purchase price of the bond is any accrued interest that has accumulated. Can you calculate this accrued amount that must be paid to the seller? *Complete the online learning activity to assess your knowledge*.

Bond Indexes

5 | Define bond indexes and how they are used in the securities industry.

An index measures the relative value and performance of a group of securities over time. Most people are familiar with stock indexes, such as the S&P/TSX Composite Index, which have been around for well over 100 years. Bond indexes, on the other hand, have been around only since the early 1970s.

Bond indexes are generally used in three ways:

- As a guide to the performance of the overall bond market or a segment of that market
- As a performance measurement tool, to assess the performance of bond portfolio managers
- To construct bond index funds

Canadian Bond Market Indexes

FTSE Global Debt Capital Markets offers a comprehensive set of Canadian bond indexes. The best known of these indexes is the FTSE Canada Universe Bond Index, which tracks the broad Canadian bond market. The index consists of bonds representing a full cross-section of government and corporate bonds. All Canadian dollar-denominated investment-grade bonds with a term to maturity of one year or more are eligible for inclusion in the index. The bonds in the index are grouped into sub-indexes in different combinations according to whether they are government or corporate bonds, their time to maturity, and the bond rating (for corporate bonds only).

The FTSE Canada Universe Bond Index measures the total return on bonds in Canada, including realized and unrealized capital gains, and the reinvestment of coupon cash flows. It is a capitalization-weighted index, with each bond held in proportion to its market value.

Global Indexes

A number of securities firms and other organizations have created bond indexes, including those detailed below, that track the many global markets:

Global bond indexes	• FTSE World Government Bond Index
U.S. bonds	• Bloomberg Barclays U.S. Aggregate Bond Index • FTSE US Broad Investment-Grade Bond Index
Government bonds	• FTSE UK Actuaries Gilts Index Series • S&P France Sovereign Inflation-Linked Bond Index
Emerging market bonds	• J.P. Morgan Emerging Markets Bond Index
High-yield bonds	• Credit Suisse High Yield Index • ICE Bank of America US High Yield Master II Total Return Index

KEY TERMS & DEFINITIONS

Can you read some definitions and identify the key terms from this chapter that match? *Complete the online learning activity to assess your knowledge.*

Summary

In this chapter we discussed the following aspects of fixed-income securities:

- Present value is the value today of an amount of money to be received in the future. The discount rate is the interest rate used to calculate present value. The fair price for a bond is the sum of the present value of its coupons and the present value of its principal.

- The current yield of any investment is the income yield on the security relative to its current market price. The YTM is calculated based on the assumption that all interest received from coupon bonds is reinvested at the YTM prevailing at the time the bond was purchased. The real rate of return is the return on an investment adjusted for the effects of inflation.

- The expectations theory states that the shape of the yield curve reflects expectations for future interest rates. The liquidity preference theory states that investors must be compensated for assuming the risk of holding longer-term debt securities. The market segmentation theory holds that investors concentrate their debt holdings in a particular term to maturity.

- When interest rates rise, bond yields rise and prices fall; when interest rates fall, bond yields fall and prices rise. Longer-term bonds are more volatile in price percentage change, compared to shorter-term bonds. Lower coupon rate bonds are more volatile in price percentage change than higher coupon rate bonds. And relative yield change is more important than absolute yield change.

- The sell side of fixed-income trading is the investment dealer side. The buy-side focuses on asset management on behalf of institutional clients. Trading in firms with a large institutional dealing desk allows for automatic execution in most cases. All non-electronic trades carried out between the investment advisor and the trader take place over the phone.

- Government of Canada T-bills settle on the day of the trade, whereas all other bonds, debentures, and certificates of indebtedness settle on the second clearing day after the transaction takes place. Interest on a bond accrues from the day after the previous interest payment date up to and including the day of settlement.

- An index measures the relative value and performance of a group of securities over time. Bond indexes are generally used as a guide to the performance of the overall bond market or a segment of that market, and as a performance measurement tool to assess bond portfolio managers. Bond indexes are also used to construct bond index funds.

Review Questions

Now that you have completed this chapter, you should be ready to answer the Chapter 7 Review Questions.

Frequently Asked Questions

If you have any questions about this chapter, you may find answers in the online Chapter 7 FAQs.

Equity Securities
Common and Preferred Shares

Chapter Overview

In this chapter, you will learn the basic features of equity securities, a category that includes common and preferred shares. We explain the investment considerations of the two broad categories, and we compare the advantages and disadvantages of investing in either type. Finally, we describe the important role played by Canadian, U.S., and global stock market indexes.

learning objectives	content areas
1 | Discuss the features benefits, and risks of common share ownership. 2 | Describe the impact of stock splits and consolidations on shareholders	**Common Shares**
3 | Describe the feature benefits, and risks of preferred shares 4 | Differentiate among the types of preferred shares	**Preferred Shares**
5 | Summarize the important stock indexes averages.	**Stock Indexes and Averages**

Key Terms

Key terms are defined in the Glossary and appear in **bold** text in the chapter.

arrears

Canadian Depositary Receipts

capital gains

CDR Ratio

consolidation

cum dividend

cumulative

dividend record date

dividend reinvestment plan

dividends

dollar cost averaging

environmental, social, and governance

ex-dividend

ex-dividend date

extra dividend

fixed / floating preferred shares

fixed-rate perpetual preferred shares

fixed-reset preferred shares

float

floating-rate preferred shares

hard retraction

non-cumulative

odd lot

pari passu

percentage changes

point changes

rate-reset preferred shares

regular dividend

responsible investment

restricted shares

retraction

reverse stock split

S&P/TSX 60 Index

S&P/TSX Composite Index

S&P/TSX Venture Composite Index

soft retraction

standard trading unit

stock average

stock dividends

stock indexes

stock split

street certificate

voting rights

Introduction

Equity securities, particularly common shares, are an important part of most investors' portfolios. History shows that the return on stocks exceeds the return on bonds over the long term. In addition, long-term common stock returns consistently outpace inflation and provide long-term protection from the loss of purchasing power.

Common shares also provide a reliable measure of overall performance in the capital markets. At the close of trading each day, market participants want to know how the markets performed. To measure that performance, they look to the various stock market indexes that have developed over time. For the most part, these indexes track the performance of a basket of common shares that represents the most visible and easily accessible of investments.

Common shares form the backbone of many investment portfolios and are a major component of pension funds, mutual funds, and hedge funds. Unlike many other types of investment, common share ownership provides a number of inherent rights, advantages, and disadvantages with which you should be familiar.

Closely related, but with some key differences, are preferred shares. Preferred shares are a staple investment in the Canadian market largely because of the fixed-income stream that the investment generates. With an investment in common shares, what you see is mostly what you get: ownership position in a company. Preferred shares are different in that they have various structures and characteristics that are designed to appeal to different investors for different reasons. In fact, having read the previous chapter on fixed-income securities, you may notice that preferred shares are similar to bonds in many of their features.

In this chapter, we discuss the benefits and risks of investing in both common shares and preferred shares. We also describe many different types of preferred shares and explain how and why investors use them.

Common Shares

1 | Discuss the features, benefits, and risks of common share ownership.

2 | Describe the impact of stock splits and consolidations on shareholders.

Common shareholders can be an individual investor, a business, or an institutional investor. The shareholders have an ownership stake in the company and are considered the owners of the public company. If the venture prospers, the shareholders benefit from the growth in value of their original investment and from the flow of dividend income that may arise. However, if the business fails, the common shareholders may lose their entire investment. This possibility of total loss explains why common share capital is sometimes referred to as *venture capital or risk capital*.

Common shares have the following characteristics:

Position on asset claims in case of bankruptcy	Bondholders, creditors (such as banks), debenture holders, and preferred shareholders all have prior claims over common shareholders on the company's assets in case of bankruptcy. Common shares, therefore, have a relatively weak position on asset claims.
Dividends	Unlike the payment of interest on outstanding debt, common share **dividends** are payable at the discretion of the board of directors. In other words, there is no guarantee of dividend income.
Evidence of ownership	Shares are often registered in **street certificate** form, which means that they are registered in the name of the securities firm, rather than the beneficial owner. This aspect increases the negotiability of the shares by making them more readily transferable to a new owner.
Clearing and settlement	CDS Clearing and Depository Services Inc. (CDS) offers computer-based systems to replace certificates as evidence of ownership in securities transactions. This system almost eliminates the need to handle securities physically.
Trading units	Stocks trade in uniform lot sizes on stock exchanges. A **standard trading unit** is a unit whose size has uniformly been decided upon by the exchanges. The usual unit of trading for most stocks is 100 shares. A group of shares traded in less than a standard trading unit is called an **odd lot**.

Benefits and Risks of Common Share Ownership

The right to buy or sell common shares in the open market at any time is an attractive feature; either process is a relatively simple matter with few legal formalities.

When a company first sells its shares to investors, the proceeds from the sale go to the company. When these outstanding shares are subsequently sold by their holders, the selling price is paid to the seller of the shares, not to the company. Shares may therefore be transferred from one owner to another without affecting the operations of the company or its finances. From the company's point of view, the effect of a sale is simply that a new name appears on its list of shareholders.

Common share ownership holds the following benefits:

- Potential for capital appreciation
- The right to receive any common share dividends paid by the company
- Voting privileges, including the right to elect directors, approve financial statements and auditor's reports, and vote on important issues

- Favourable tax treatment in Canada of dividend income and **capital gains**
- Marketability—the shareholdings of most public companies can easily be increased, decreased, or sold
- The right to receive copies of the annual and quarterly reports, as well as other mandatory information pertaining to the company's affairs
- The right to examine certain company documents, including its by-laws and its register of shareholders, at specified times
- The right to question management at shareholders' meetings
- Limited liability

Along with these benefits and the potential for large capital appreciation, investors should be aware of the following risks of investing in common shares:

- The issuer has no obligation to pay dividends.
- Common shareholders generally have very little influence over the day-to-day operations of the company.
- Common share prices can be volatile, and price changes can lead to investors losing money.
- In terms of claims to assets, common shareholders fall behind creditors, bondholders, and preferred shareholders in the case of bankruptcy or dissolution.

Capital Appreciation

Capital appreciation is any increase in the value of a company's assets, including the value of its common shares. The prospect of capital appreciation is the main attraction of common shares for many investors.

A company's net earnings may be kept as retained earnings and reinvested in the business or distributed to shareholders, in whole or in part, as dividends. When earnings are retained, the value of the company's common shares may increase. The size of shareholder's equity increases accordingly, which makes the stock more attractive to investors. Higher demand for a company's stock, and a corresponding increase in the company's value, can also result from increasing profits and dividend payments.

However, not all common shares fulfill investor expectations. Even when a company increases shareholder equity, earns profits, and increases dividend payments, its shares may not necessarily increase in value every year. Many other factors can affect a company's stock price. Therefore, careful analysis is required to ensure a profitable investment, particularly one that suits your investment horizon (e.g., are you investing for the short term or long term?). We will discuss stock price analysis in detail in Volume II of this course.

Dividends

Dividend policy is determined by a company's board of directors, who are guided primarily by the company's size, goals, and financial position, and by the industry in which it participates. For example, a large, established company such as a bank may pay out a substantial percentage of its earnings as dividends to shareholders, whereas a growing tech company may need to keep a higher proportion of earnings within the business to fund research and development.

Most companies retain some portion of earnings each year to maintain operations and finance growth. In the long run, this policy works to the benefit of shareholders if it results in increased earnings.

Dividends are sometimes reduced or halted, particularly in poor economic times. Although such interruptions may be temporary, they should be recognized as one of the risks of common share investment.

REGULAR AND EXTRA DIVIDENDS

Companies paying common share dividends might designate a specified amount to be paid each year as a **regular dividend**. The term *regular* indicates to investors that, barring a major collapse in earnings, those payments will be maintained.

Some companies may pay an **extra dividend** on the common shares, usually at the end of the company's fiscal year. The extra payment is a bonus paid in addition to the regular dividend. The term *extra* indicates that investors should not assume that the payment will be repeated the following year.

DECLARING AND CLAIMING DIVIDENDS

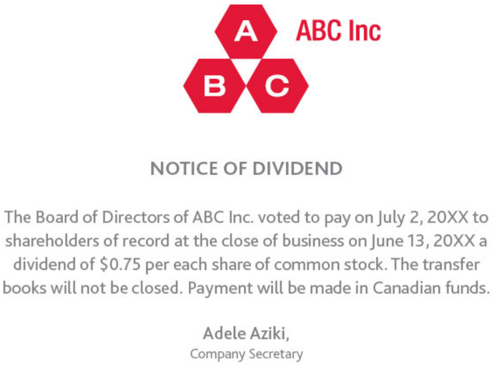
Companies may pay dividends once, twice, or four times a year. Unlike interest on debt, however, dividends on common shares are not a contractual obligation. The board of directors decides whether to pay a dividend and—if it is to be paid—the amount and payment date. An announcement is then made in advance of the payment date.

If the shares are registered in the name of the owner, dividend payment cheques are mailed directly to the owner. For shares registered in street certificate form, dividend payments are made to the securities firm whose name appears on the certificate. The dividends are then credited to the accounts of the firm's clients who own the shares.

EX-DIVIDEND AND CUM DIVIDEND

Many companies announce the declaration of a dividend through various channels, including print media, press releases, and their company websites. A typical newspaper dividend announcement is shown in Figure 8.1.

Figure 8.1 | Notice of Dividend



ABC Inc

NOTICE OF DIVIDEND

The Board of Directors of ABC Inc. voted to pay on July 2, 20XX to shareholders of record at the close of business on June 13, 20XX a dividend of $0.75 per each share of common stock. The transfer books will not be closed. Payment will be made in Canadian funds.

Adele Aziki,
Company Secretary

When a stock is actively traded, the record of shareholders is continually changing. For convenience, the issuing company names a date known as the **dividend record date**, and all shareholders recorded as of this date are entitled to the declared dividend. The dividend record date is usually two to four weeks in advance of the payment date. The purpose of the interval (between June 13 and July 2 in Figure 8.1) is to give the company time to prepare the dividend cheques for mailing to recorded shareholders. Investors who buy shares during this interval are not entitled to the declared dividend. Those shares are referred to as **ex-dividend** (without dividend) shares.

To determine whether the seller or the buyer is entitled to a dividend when a sale takes place around the time of the dividend payment, the stock exchange names an **ex-dividend date**. Before this date, shares are sold **cum dividend** (with dividend); that is, the buyer receives the dividend. On and after this date, they sell ex-dividend; that is, the seller retains the dividend.

The ex-dividend date is set at one business day before the dividend record date. Because common and preferred share trades settle on the second business day after a trade, an investor who buys shares one day before the record date would not have the trade settle until the day after the record date. The buyer would therefore not be a shareholder of record and thus would not receive the dividend. The last day a stock trades cum dividend is the *second* business day *before* the dividend record date; in other words, it is the day before the first ex-dividend date.

Using the dates shown in Figure 8.1, and assuming that none of the weekdays are holidays, the shares would trade as shown in Table 8.1. Note that weekends are not counted when determining the settlement date of a stock transaction.

Table 8.1 | Trading Ex-dividend and Cum Dividend

Date of Trade	Settled	Ex-dividend or Cum Dividend
Monday, June 9	Wednesday, June 11	Cum Dividend
Tuesday, June 10	Thursday, June 12	Cum Dividend
Wednesday, June 11	Friday, June 13	Cum Dividend
Thursday, June 12	Monday, June 16	Ex-dividend
Friday, June 13	Tuesday, June 17	Ex-dividend
Monday, June 16	Wednesday, June 18	Ex-dividend

Did You Know?

The major Canadian stock exchanges publish dividend announcements in their daily news releases.

DIVIDEND REINVESTMENT PLANS

Some major companies give their preferred and common shareholders the option of participating in an automatic **dividend reinvestment plan**. In such a plan, the company diverts the shareholders’ dividends to the purchase of additional shares of the company. Reinvested dividends are taxable to the shareholder as ordinary cash dividends, even though the dividends are not received as cash.

Share purchases, in most dividend reinvestment plans, are made on the open market under the direction of a trustee. Participating shareholders are periodically sent a statement showing the number of shares bought under the plan (including fractional shares in some cases) and the price at which they were bought. The provision in some plans for crediting participating shareholders with applicable fractions of shares is unique. Normally, fractions of shares cannot be purchased in the market by a shareholder.

Under a reinvestment plan, the company uses authorized dividends to purchase additional shares in bulk. For this reason, it pays a lower commission than would an individual shareholder buying the same small number of shares. The commission is particularly high for individuals when odd lots are involved.

In effect, a dividend reinvestment plan is an automatic savings plan that allows investors to reinvest small amounts of cash. Participating shareholders acquire a regular, gradually increasing share position in the company at a reduced average cost per unit. This process is known as **dollar cost averaging**.

STOCK DIVIDENDS

Some dividends are in the form of additional stock rather than cash. These so-called **stock dividends** are typically paid by rapidly growing companies that must retain a high proportion of earnings to finance future growth. Shareholders receiving stock dividends can sell them if they require the cash. Stock dividends are recorded on a company's statement of retained earnings in the same fashion as cash dividends.

Because stock dividends are treated as regular cash dividends for tax purposes, many investors, given the option, elect to receive dividends in cash.

Voting Privileges

Voting rights are an important feature of common shares. Usually, each common shareholder has one vote for each share owned. Through the right to vote at the annual meeting and at special or general meetings, shareholders exercise their rights as owners to control the destiny of the corporation.

However, many companies have two or even three different types of shares, often designated as Class A, B, or C. Not all classes have voting rights and may differ in other respects, such as dividend entitlement. Therefore, it is important to know their respective features.

RESTRICTED SHARES

Restricted shares (or special shares) give the shareholder the right to participate to an unlimited degree in the earnings of a company and in its assets on liquidation, but they do not carry full voting rights.

There are three categories of restricted shares:

- Non-voting shares carry no right to vote, except in certain limited circumstances.
- Subordinate voting shares carry a right to vote if another class of shares is outstanding and those shares carry a greater voting right on a per-share basis.
- Restricted voting shares carry a right to vote, subject to a limit or restriction on the number or percentage of shares that may be voted by a person, company, or group.

In recent years, the number of companies issuing restricted shares has increased substantially. Some investors have become concerned and have resisted efforts by companies to reorganize and create restricted shares.

Did You Know?

Canadian securities regulators have introduced policies regarding restricted shares. For example, Ontario sets out the details of these rules in the Ontario Securities Commission Rule 56-501. As an investment advisor, you should be able to identify restricted shares and understand their implications. You should also communicate the differences in the voting rights of such shares to your clients to provide proper advice.

STOCK EXCHANGE REGULATIONS OF RESTRICTED SHARES

The stock exchanges and securities commissions published the following regulations regarding restricted shares:

- Restricted shares must be identified by the appropriate restricted share term.
- Disclosure documents—including information circulars, annual reports, and financial statements sent to voting shareholders—must also be sent to holders of restricted shares, and the documents must describe the restrictions on their voting rights.
- Restricted shares must be identified in the financial press with a code.
- Dealer and advisor literature must properly describe restricted shares.
- Trade confirmations must identify restricted shares.
- Holders of restricted shares must be given notice of shareholders' meetings. They must also be invited to attend and be permitted to speak at the meetings.
- Minority approval is required for any corporate action that would result in the creation of new restricted shares.

As an investment advisor, you should be aware of the protection offered to restricted shareholders, which may vary in terms of extent.

RESPONSIBLE INVESTMENT

Responsible investment refers to the incorporation of **environmental, social, and governance** (ESG) factors into the selection and management of investments. There is growing evidence that incorporating ESG factors into investment decisions can reduce risk and improve long-term financial returns.

In Canada, responsible investing gained prominence during the 1970s and 1980s. At that time, it was commonly known as ethical or socially responsible investing. Since then, shareholder activism and corporate engagement have become commonplace. Canadian mutual funds, pension funds, and coalitions of shareholders work with churches, unions, and other responsible investors to engage with companies. Where necessary, they sponsor shareholder resolutions on a variety of ESG issues.

Today, there is no one-size-fits-all strategy or approach to responsible investing. Responsible investors practice both values-driven approaches, which incorporate the investors' moral or ethical beliefs, and valuation-driven approaches, which consider the materiality of ESG issues. There are numerous strategies available to serve the diversity of responsible investors, including ESG integration, shareholder engagement, screening, thematic, and impact investing. On the more technical side, there are even more sub-strategies, including carbon efficiency and ESG momentum, among others.

Environmental, Social, and Governance Issues

Environmental, social, and governance issues are some of the most important drivers of change in the world today. They are also critical economic issues with significant implications for businesses and investors. Examples of ESG issues are as follows:

Environmental

- Climate change

	• Conservation of natural resources • Waste management • Water scarcity
Social	• Diversity and inclusion • Human capital management • Human rights • Indigenous and community relations
Governance	• Corruption and bribery • Executive compensation • Risk and crisis management • Supply chain management

There are many sources of ESG information, including corporate ESG ratings and rankings, corporate sustainability reports, in-house research, ESG information disclosure in securities filings, and media coverage.

Investors have a number of choices available to them beyond equities to pursue responsible investment. Responsible investments are found in all major asset classes, and numerous investment vehicles are available to retail investors, as follows:

- Community bonds
- Exchange-traded funds
- Green bonds
- Social bonds
- Sustainability- and transition-linked bonds
- Sustainability bonds
- Retail venture capital funds
- Segregated funds
- Separately managed accounts
- Guaranteed investment certificates
- Mutual funds
- Structured products

Stock Splits and Consolidations

At any one time, a publicly traded company will have a set number of outstanding shares trading in the marketplace. The company's board of directors may decide, as part of their corporate strategy, to alter the number of shares outstanding using a **stock split** or **reverse stock split** (or **consolidation**).

Most companies believe it is good corporate strategy to keep the market price of their shares within a specific price range, say between $10 and $20, or comparable to the price levels of similar companies in their sector. The primary motive in using a stock split or reverse split is to make the company's share price more affordable for investors.

STOCK SPLITS

With a stock split, the number of shares outstanding increases as the company will issue more shares to the current shareholders. After the split, the stock's price will be reduced because the number of shares outstanding has increased.

EXAMPLE

In a four-for-one split, three additional shares are given for *each* share held by a shareholder. So, if you owned 1,000 shares of the company before the split, you would now own 4,000 shares after the split. If the market price of the shares was $100 before the split, the share price will be somewhere in the $25 range after the split.

What is important to understand is that the investment value of your holdings would remain unchanged:

Pre-split value: $100 × 1,000 shares = $100,000

After the split: $25 × 4,000 shares = $100,000

When the market price of a company's shares is too high, a stock split is an effective means to reduce the price. The market price of the new shares reflects the basis of the split, and each shareholder's total shareholdings in the company increase accordingly.

The split itself does not affect the dollar value of the company's equity, nor does it change the proportion and value of a shareholder's stake. Equity per share is reduced as the total number of shares outstanding increases, but the equity section of the statement of financial position remains unchanged.

REVERSE stock SPLIT

When the market price of a company's shares is too low, a reverse stock split can be used to raise the price. The new price reflects the basis of the consolidation, and each shareholder's total shareholdings in the company are reduced accordingly.

EXAMPLE

If a reverse split of one new share for 10 old shares were implemented, a shareholder owning 100 shares of stock would now own only 10 new shares. For example, if the shares were selling at $0.25 before the reverse split, the new shares would trade near $2.50 per share. The total dollar value of the holdings would not be affected: $0.25 × 100 shares before consolidation = $2.50 × 10 shares after consolidation.

Reverse splits occur most frequently when a company's shares have fallen in value to a level that is unattractive to investors with large amounts of capital. Companies use them when they are in danger of being delisted by a stock exchange because their share price has fallen below the exchange's minimum share price rule. A reverse split raises the market price of the new shares and can put the company in a better position to raise new capital.

Canadian Depositary Receipts™

According to the World Bank, Canada represents approximately 3% of the world's capital markets, which means the average Canadian's direct exposure to international markets is limited if they focus on investing in domestic stocks. But there are disadvantages to investing in international stocks, including exchange rate fees, foreign exchange rate risk, and, in some cases, high stock prices that make some international company shares inaccessible.

EXAMPLE

Conner invested $10,000 in Canadian funds in an American stock that traded on the NYSE when the Canadian dollar was trading at $0.80 U.S. per Canadian dollar. After exchanging his money for U.S. currency and purchasing the stock, he decided to sell the stock three months later for a 12% gain. At the time of sale, the value of the Canadian dollar had increased to $0.84 U.S. dollars per Canadian dollar. After the sale, when Conner exchanged his U.S. dollars back to Canadian currency, he was left with $10,666, which represents a return of only 6.67%, far from the 12%

gain on the stock that he had hoped for.

Canadian Depositary Receipts (CDRs) are securities designed to give Canadians access to popular U.S. and global companies that trade on the NYSE and NASDAQ, but they are listed on the Canadian NEO Exchange in Canadian dollars. Trading CDRs in Canadian dollars removes the impact of fluctuating exchange rates. Although CDRs are a relatively new product for the Canadian markets, they were first introduced in the U.S. as American Depositary Receipts in 1927.

One of the key features of CDRs is a built-in currency hedge, based on the **CDR Ratio**. The CDR Ratio is the method used to increase or reduce the number of underlying shares of the CDR based on how the Canada/U.S. exchange rate changes. The process virtually eliminates the effect of exchange rate changes on the investment. The CDR Ratio is adjusted daily, as follows:

- If the value of the Canadian dollar increases versus the U.S. dollar, the CDR is adjusted so that it represents a larger number of underlying shares.
- If the value of the Canadian dollar decreases versus the U.S. dollar, the CDR is adjusted so that it represents a smaller number of underlying shares.

This daily adjustment helps to keep the dollar value of the investment relatively unchanged despite exchange rate fluctuations, and only the impact of the underlying stock's price change affects the investor's investment value.

EXAMPLE

Conner invested $10,000 in Tesla CDRs on the NEO Exchange at a price of $25 per CDR in September 2021. At the same time, Tesla shares were trading around $1,200 U.S. on NASDAQ. By late October, Tesla CDRs were trading at $28 per CDR when Conner closed his position. He gained 12% on his investment. Over that time, the value of the Canadian dollar increased from $0.78 U.S. per Canadian dollar to $0.81 U.S. per Canadian dollar. The change in the value of the Canadian dollar had no impact on Conner's CDR investment.

This example highlights a primary benefit of investing in CDRs – access to fractional ownership of high-priced stocks in lower-priced Canadian dollar versions.

Other key features of CDRs are as follows:

Dividends	Canadian CDR investors are paid dividends from the underlying shares in Canadian dollars.
Fees	CDRs have no ongoing management fees. They also allow investors access to institutional foreign exchange rates.
Liquidity	CDR liquidity is dependent on the liquidity of the underlying security. The higher the trading volume of the underlying security, the higher the liquidity of the CDR. Therefore, it is possible for a CDR itself to have a low trading volume but still have narrow bid-ask spreads based on the underlying stock.
Lower price per share	Many of the large global companies trade at high prices, which makes stock purchases inaccessible to the average retail investor. For example, when Amazon closed at $2,887.00 U.S. per share on the NASDAQ on April 22, 2022, the Amazon CDR closed on the NEO Exchange at $18.00 CDN per CDR on the same day. The price of a CDR is initially set to approximately $20 when first issued on the NEO Exchange.
Qualified investments	CDRs are qualified investments that can be held in registered retirement savings plans, registered retirement income funds, registered education savings plans, and

tax-free savings accounts. Registered plans and tax-free savings accounts are covered in greater detail in Chapter 24.

Taxation The current assumption regarding taxation is that owning CDRs is equivalent to owning the underlying stock. As such, a CDR owner may be subject to U.S. withholding taxes. It is recommended that CDR investors seek tax advice regarding how their investment will be treated and the U.S. Internal Revenue Agency forms that may be required for tax filings.

Voting rights Canadians who invest in CDRs are entitled to vote based on the number of shares reflected by the total ownership of their CDRs.

CIBC brought CDRs to the Canadian market in 2021. Listings on the NEO Exchange include Amazon, Apple, Home Depot, IBM, Netflix, Tesla, and Walmart, to name a few.

Reading Stock Quotations

Two kinds of stocks are traded during the day: those listed—and thus traded—on the stock exchanges, and the unlisted stocks that trade on the over-the-counter market.

A typical quotation for stocks traded in Canada on the stock exchanges is shown in Table 8.2.

Table 8.2 | BEC Inc. Stock Quotation

52 Weeks
[illegible]
[illegible]

This type of quotation, which may vary in format depending on the media source, is complex but useful. The quotation in Table 8.2 can be interpreted as follows:

- BEC common has traded as high as $12.55 per share and as low as $9.25 during the last 52 weeks.
- BEC common has paid dividends totalling $0.50 per share during the last 52 weeks. (Sometimes, an indicated dividend rate may appear if the company pays regular dividends and has recently increased a dividend payment.)
- During the day under review, BEC common shares traded as high as $10.65 and as low as $10.25.
- The last trade of the day in this stock was made at $10.35.
- The closing trade price was $0.50 higher than the previous trading day's closing trade price. (Therefore, BEC shares closed at $9.85 on the previous trading day.)
- A total of 6,000 BEC common shares traded that day.

Note that market prices used in stock quotations apply to standard trading units and exclude the commission expense for trades in listed stocks.

Common Shares

What are the key features and benefits of common shares from the point of view of both the issuer and the investor? *Complete the online learning activity to assess your knowledge.*

Preferred Shares

3 | Describe the features, benefits, and risks of preferred shares.

4 | Differentiate among the types of preferred shares.

When a company needs to raise capital, there are generally three types of securities they can issue: bonds or debentures, common shares, and, less frequently, preferred shares (which are sometimes referred to as *preferred stock* or simply preferreds).

Preferred shareholders are usually entitled to a regular dividend payment, subject to the discretion of the board of directors. Because of this income stream, most preferred shares are treated by investors like a type of fixed-income security. However, preferred shareholders are not in the same category as creditors holding typical fixed-income securities, such as bonds and debentures. As part owners of a company, along with common shareholders, preferred shareholders rank behind creditors in their claim to assets. Preferred shareholders do, however, have priority status over common shares in the event of bankruptcy or dissolution of the company.

Some companies issue more than one class or series of preferred shares. When this occurs, each class or series is identified separately. If the rank of various outstanding preferred share issues is equal as to asset and dividend entitlement, the shares are described as ranking **pari passu**.

EXAMPLE

ABC Corporation Limited has four preferred share issues outstanding: 5.25% Class A preferred shares, Class B floating-rate preferred shares, 4.50% Class C preferred shares and 4.25% Class D preferred shares. Each issue has a par value of $25 per share and the four issues rank equally as to asset and dividend entitlement. The preferred shares thus rank pari passu with each other.

preferred share features

Preferred shares have several features that reflect their unique position relative to common shares and bonds and debentures.

PREFERENCE AS TO ASSETS

As mentioned already, preferred shareholders rank ahead of common shareholders but behind creditors and debtholders in their claim to assets. Preferred shareholders are therefore better protected than common shareholders but less protected than creditors and debtholders.

Because preferred shareholders usually have no claim on earnings beyond the fixed dividend, it is fair for their position to be buttressed by a prior claim on assets, ahead of the common shares. The common shareholder must be content with anything that is left after all creditor, debtholder, and preferred shareholder claims have been met.

PREFERENCE AS TO DIVIDENDS

Preferred shares are usually entitled to a fixed or floating dividend expressed either as a percentage of the par or stated value or as a stated amount of dollars and cents per share.

EXAMPLE

DEF Inc.'s $25 par value 3.50% Series E Fixed Rate preferred shares, currently trading at $26.50 per share, pay a fixed annual dividend of $0.875 per share ($25 par value × 3.50% = $0.875 annual dividend). The quarterly dividend payment, when declared by the board of directors, is one-fourth of this amount, or $0.21875 per share. An investor who owns 1,000 shares would therefore receive $218.75 in dividends four times a year.

GHI Ltd.'s $25 par value Series F Floating Rate preferred shares, currently trading at $24.75 per share, pay a monthly dividend equal to 75% of the average Canadian Bank Prime Rate during the month. If the average rate in the current month is 4%, the dividend would be $0.0625 per share ($25 par value × (0.75 × 4%) ÷ 12). An investor who owns 1,000 shares would therefore receive $62.50 this month, but monthly dividend payments in the future would be based on future values of the Canadian Bank Prime Rate.

Dividends are paid from earnings, either current or past. However, unlike interest on a debt security, dividends are not obligatory; they are payable only if declared by the board of directors. If the board omits the payment of a preferred dividend, there is very little the preferred shareholders can do about it. However, in almost all cases, company charters provide that no dividends are to be paid to common shareholders until preferred shareholders have received full payment of the dividends to which they are entitled.

Directors have the right to defer the declaration of preferred dividends indefinitely. In practice, however, dividends are paid if they are justified by earnings. Failure to declare an anticipated preferred dividend has unfavourable repercussions. Besides weakening investor confidence, the general credit and future borrowing power of the company will suffer.

Because most preferred shares can be considered fixed-income securities, they do not offer the same potential for capital appreciation that common shares provide for investors. Should interest rates decline, preferred share prices will tend to increase in price, much like a bond. However, good corporate earnings will have no effect on a preferred share's dividend or claim to assets. Therefore, the preferred share dividend rate is of prime importance to the preferred shareholder.

other features

Beyond their place in the capital structure and entitlement to dividends, the following features can be built into a preferred share, either to strengthen the issuer's position or to protect the investor's position.

Cumulative or non-cumulative dividends

Preferred share dividends can be **cumulative** or **non-cumulative**. If a company's board of directors votes not to pay one or more preferred share dividends when due, and the preferred share has a cumulative dividend feature, the unpaid dividends accumulate in what is known as **arrears**. All arrears of cumulative preferred dividends must be paid before common share dividends are paid or before the preferred shares are redeemed. With a non-cumulative dividend feature, arrears do not accrue, and the preferred shareholder is not entitled to *catch-up* payments if dividends resume. Most preferred shares in Canada have a non-cumulative dividend feature.

Term to maturity

Most preferred shares have no stated maturity date. Depending on the specific features of a preferred share, investors may not have the ability to force the

	repayment of the par value, therefore, a preferred share can be outstanding for an indefinite period.
Callable feature	Almost all preferred shares are callable, meaning they can be called or redeemed by the issuer at a stated time and stated price. Depending on when a preferred share is called, it may provide for the payment of a small premium above the issue price. The premium is compensation to the investor whose shares may be called for redemption.
Retraction feature	A preferred share with a **retraction** feature gives shareholders the right to force the company to buy back the shares on a specified date at a specified price. Some are issued with two or more retraction dates. The principle of retraction, or *pulling back*, is identical to the principle for retractable bonds and debentures, which we discussed in Chapter 6. The holder of a preferred share with a retractable feature can create a maturity date for the preferred by exercising the retraction privilege and tendering the shares to the issuer for redemption. With a **hard retraction** feature, the company must pay the redemption value in cash. A **soft retraction** feature allows the company to pay the redemption value in cash or common shares of the issuer.
Voting privileges	Virtually all preferred shares are non-voting if preferred dividends are paid on schedule. However, after a stated number of preferred dividends have been omitted, it is common practice to assign voting privileges to the preferred shares.

TYPES OF PREFERRED SHARES

The Canadian preferred share market has undergone many changes in the past few decades, sometimes in response to regulatory changes, sometimes dues to changes in investor demand. Changes have driven issuers and their investment bankers to come up with new ways to package a stream of dividends that investors crave while also ensuring that the terms and features keep pace with regulatory requirements.

fixed-rate perpetual preferred shares

As their name suggests, **fixed-rate perpetual preferred shares** pay a fixed quarterly dividend, typically expressed as an annual percentage of the issue price, and have no stated maturity date. Like almost all Canadian preferred shares, however, issuers have the right to call or redeem fixed-rate perpetual preferred shares on established dates at prices set at the time of issue. The first call date is normally five years after the issue date, with a call price slightly above the issue price. The call price then declines by a set amount each year, so that it equals the issue price after five years. Issuers then can call the preferred share each year thereafter at a call price equal to the issue price.

EXAMPLE

The holders of ABC Corporation Limited's $25 par value, 5.25% Class A Non-Cumulative Redeemable fixed-rate preferred shares are entitled to fixed, non-cumulative cash dividends, if declared by the board of directors, at a rate of 5.25%, or $1.3125 per share per year, payable quarterly on the last day of March, June, September, and December at a rate of $0.328125 per share.

Subject to certain provisions, the Class A preferred shares are redeemable at ABC Corporation Limited's option at the following prices:

- $26.00 per share on or after March 31, 20x1, but prior to March 31, 20x2;
- $25.75 if redeemed on or after March 31, 20x2, but prior to March 31, 20x3;

- $25.50 if redeemed on or after March 31, 20x3, but prior to March 31, 20x4;
- $25.25 if redeemed on or after March 31, 20x4, but prior to March 31, 20x5;
- $25.00 if redeemed on or after March 31, 20x5.

As with the market price of bonds and debentures, if interest rates rise, the fixed dividend payment becomes less valuable to investors, and the market price of fixed-rate perpetual preferred shares will fall. If interest rates decline, the fixed dividend payment becomes more valuable to investors, and the market price of perpetual preferred shares will rise.

floating-rate preferred shares

Floating-rate preferred shares pay a dividend that adjusts, or *floats*, based on either a percentage of the Canadian Bank Prime Rate or the yield on 3-month Government of Canada Treasury bills plus a spread. Some floating-rate preferred shares pay dividends quarterly while others pay monthly. Dividend payments can be based on the value of the floating-rate benchmark on the previous dividend payment date or on the average value of the floating-rate benchmark during the current period. Floating-rate preferred shares do not have a stated maturity date but can be called by the issuer, usually after a set period after the issue date and regularly thereafter, at prices determined at the time of issue.

EXAMPLE

The holders of ABC Corporation Limited's $25 par value, floating-rate Class B Non-Cumulative Redeemable preferred shares are entitled to variable, non-cumulative cash dividends if declared by the board of directors. The dividends are payable on the last business day of March, June, September, and December, with the annual variable dividend rate being equal to the sum of the yield on the 3-month Government of Canada Treasury bill at the beginning of the quarter plus 2.62%.

Subject to certain provisions, the Class B preferred shares are redeemable at ABC Corporation Limited's option at $25.50 per share.

Some companies issue floating-rate preferred shares directly, but most floating-rate preferred shares in Canada result from shareholder options embedded in fixed-rate preferred shares.

Fixed-reset preferred shares

Fixed-reset preferred shares are preferred shares with fixed dividend rates that periodically change, or *reset,* according to a formula or process outlined at the time the shares are issued. There have been two broad types of fixed-reset preferred shares issued in Canada: **rate-reset preferred shares** and **fixed / floating preferred shares**.

Rate-reset preferred shares have an initial 5-year term during which shareholders are paid a fixed dividend rate based on the yield to maturity on the 5-year benchmark Government of Canada bond plus a spread. The spread represents the market's view of the issuer's creditworthiness at the time the preferred shares are issued, with a smaller spread indicating superior creditworthiness compared to a larger spread.

At the end of the initial five-year term, and every five years thereafter, the issuer can call the shares for redemption at the initial offer price. If the issuer does not call the shares, shareholders can choose between two options:

1. Keep the preferred share, but with a dividend rate for the next five-year period reset to the current yield to maturity on the 5-year benchmark Government of Canada plus the same spread that was used to determine the fixed rate during the initial five-year period.
2. Exchange the fixed-rate preferred share for a floating-rate preferred share.

EXAMPLE

The holders of ABC Corporation Limited's $25 par value, Class C Non-Cumulative Redeemable fixed-reset preferred shares are entitled to fixed, non-cumulative cash dividends if declared by the board of directors. The dividends pay at a rate of 4.50%, or $1.125 per share per year during the initial five-year period, payable quarterly on the last day of March, June, September, and December at a rate of $0.28125 per share.

For each five-year period after the initial five-year period, holders of the Class C preferred shares will be entitled to fixed, non-cumulative cash dividends if declared by the board of directors. Dividends are payable quarterly on the last day of March, June, September, and December in an amount per share per year determined by multiplying the sum of the then-current 5-year Government of Canada bond yield and 2.62% by $25.

Subject to certain provisions, holders of the Class C shares will have the option to convert their shares into Class B Non-Cumulative Redeemable floating-rate preferred shares at the end of the initial five-year period and every fifth year thereafter.

Also subject to certain provisions, the Class C preferred shares are redeemable at ABC Corporation Limited's option at $25 per share at the end of the initial five-year period and every fifth year thereafter.

Fixed-reset preferred shares can also be issued in the form of a fixed / floating preferred share. These are like rate-reset preferred shares in that they pay a fixed dividend for an initial five-year term. After that period, if not called by the issuer, shareholders have the option to continue receiving fixed-rate dividends that have been reset or receive a floating-rate preferred share. Unlike rate-reset preferred shares, however, the fixed-rate dividend is not tied to a specific spread above the 5-year Government of Canada bond. Instead, it is determined by the issuer subject to certain minimum conditions specified at the time of issue. The option to convert to a floating-rate preferred share is available to fixed-reset preferred shareholders every five years on the anniversary of the issue date.

EXAMPLE

The holders of ABC Corporation Limited's $25 par value, Class D Non-Cumulative Redeemable fixed-reset preferred shares are entitled to fixed, non-cumulative cash dividends, if declared by the board of directors, at a rate of 4.25%, or $1.0625 per share per year, during the initial five-year period. The dividends are payable quarterly on the last day of March, June, September, and December at a rate of $0.265625 per share.

For each five-year period after the initial five years, holders of the Class D preferred shares will be entitled to fixed, non-cumulative cash dividends if declared by the board of directors. The dividends are payable quarterly on the last day of March, June, September, and December in an amount per share per year determined by

ABC Corporation, provided that the annual rate shall not be less than 125% of the then-current 5-year Government of Canada bond yield.

Subject to certain provisions, holders of the Class D shares will have the option to convert their shares into Class B Non-Cumulative Redeemable floating-rate preferred shares at the end of the initial five-year period and every fifth year thereafter.

Also subject to certain provisions, the Class D preferred shares are redeemable at ABC Corporation Limited’s option at $25 per share at the end of the initial five-year period and every fifth year thereafter.

Fixed / floaters used to be the dominant issue type in Canada, but they have since been surpassed by rate-reset preferred shares because of the extra degree of certainty associated with the calculation of the reset rate.

Why Companies Issue Preferred Shares

In comparison with debt, preferred shares are usually more expensive for a company because dividends paid are not a tax-deductible expense. However, when all considerations are weighed, there may be sufficient advantages to justify a new preferred share issue.

PREFERRED SHARE ISSUE VERSUS DEBT ISSUE

From a company’s viewpoint, preferred shares do not generally create the demands that a debt issue creates. They do not usually have a maturity date, and if a preferred dividend payment is omitted, no assets can be seized by preferred shareholders.

A corporation will choose to issue preferred shares rather than debt in the following circumstances:

- It is not feasible for the company to market a new debt issue because existing assets are already heavily mortgaged.
- Market conditions are temporarily unreceptive to new debt issues.
- The company has enough short- and long-term debt outstanding (i.e., its debt-to-equity ratio is high).
- The directors are reluctant to assume the legal obligations to pay interest and principal.
- The directors decide that paying preferred share dividends will not be onerously expensive.

PREFERRED SHARE ISSUE VERSUS COMMON SHARE ISSUE

When a company has decided that it will not, or cannot, issue bonds or debentures, it may find that conditions are not favourable for selling common shares either. The stock market may be falling or inactive, or business prospects may be uncertain. In such circumstances, preferred shares might be marketed as a compromise acceptable to both the issuing company and investors. Preferred shares also offer the advantage of avoiding the dilution of equity that results from a new issue of common shares.

Did You Know?

Because preferred shares typically do not have any claim on shareholder’s equity beyond their par value, the issuance of preferred shares does not affect the common shareholders' equity claims. Likewise, it does not reduce the proportional ownership of common shareholders.

Why Investors Buy Preferred Shares

Investors buy preferred shares for several reasons, including their yield, their tax treatment, and their ability to help diversify a portfolio of common shares and bonds.

- **Higher yields than bond yields**
  Generally speaking, the dividend yields on preferred shares have been greater than the yields to maturity on bonds. This makes preferred shares attractive to investors who are trying to generate income from their portfolios.
- **Preferential tax treatment**
  For individual and corporate investors, the dividends received on Canadian preferred shares benefit from the dividend tax credit. This means that the after-tax yield advantage of preferred shares is even greater than the pre-tax yield advantage. We discuss taxation of dividends more thoroughly in Volume II.
- **Portfolio diversification**
  Historically, the returns provided by preferred shares have had a relatively low correlation to common shares and bonds. This makes them attractive from a portfolio construction standpoint because it means preferred shares offer diversification benefits – either higher returns without higher risk or lower risk without lower returns – when they are added to a portfolio consisting of common shares and bonds.

risks of investing in preferred shares

While preferred shares can be attractive investments to many investors, they are not risk free; in fact, their risks are similar to those of fixed-income securities.

INTEREST RATE RISK

Because they represent a claim on a stream of dividends, preferred shares are sensitive to the general level of interest rates. A specific preferred share's sensitivity to interest rate fluctuations depends on several factors, particularly whether the dividend is fixed or floating, the size of the dividend, and the time to the next redemption date.

When interest rates rise, the prices of fixed-rate preferred shares tend to fall because the fixed dividend will be worth less to investors in a higher rate environment. In addition, in a rising-rate environment, fixed-rate preferred shares with a low dividend and longer term to maturity, all else being equal, will fall more than a preferred share with a higher dividend and shorter term to maturity. The reverse is true in both cases when interest rates fall.

Floating-rate preferred shares, on the other hand, are much less sensitive to interest rates because investors know the dividend will reset up or down each quarter based on the prevailing level of interest rates. That said, between dividend payment dates, it is possible for the price of floating-rate preferred shares to increase in anticipation of higher future dividends.

CREDIT RISK

In addition to the terms of a specific preferred share, investors assess the creditworthiness of preferred share issuers when deciding how much they are willing to pay for the preferred share. Because preferred shareholders rank below all creditors and bondholders in the event of bankruptcy, preferred share prices can be quite sensitive to changes in perceived creditworthiness, especially when that perception goes down. In that case, the price of the issuer's preferred shares will likely fall, with the biggest declines occurring in the prices of fixed-rate perpetual preferred shares and those that appear less likely to be called in the near term, indicating they may be outstanding for an extended period.

Did You Know?

Many issuers of preferred shares obtain a credit rating from a designated credit rating organization. These ratings help investors determine the relative creditworthiness of the various issuers of preferred shares. In Canada, preferred share credit ratings are published by Standard & Poor's and DBRS Morningstar.

CALL RISK

Because almost all preferred shares are callable at the option of the issuer, investors are subject to call risk, which is the risk that they will be forced to give up their preferred shares when it is not in their best interest, which usually occurs when preferred shares are trading at a premium to their par value. The call risk of preferred shares is the biggest reason their upside price potential is limited. Investors are hesitant to bid up the price of a preferred share too high because they know the issuer will likely call it for redemption when the market indicates that it can probably issue a new preferred share with more favourable terms.

EXTENSION RISK

A corollary to call risk is extension risk. If a preferred share does not have a retraction feature, the issuer has the sole ability to determine when it will return the par value to investors. It can effectively keep extending the repayment date by simply not calling the preferred share for redemption. Investors can always sell their preferred shares in the market, but if the market price is below the par value, then there is a strong possibility it won't be redeemed at the next redemption date.

LIQUIDITY RISK

The total market value of preferred shares in Canada is a fraction of the market value of common shares and bonds and debentures. As a result, the value that changes hands each day through trading on Canadian exchanges is also small. Furthermore, the fact that a good portion of many preferred shares is held by individual investors means that the liquidity in any individual preferred share is quite low. While it is easy to buy or sell a small quantity of most preferred shares without a big impact on price, any orders for quantities of significant size can be hard to execute quickly without the investor having to pay a premium or sell at a discount to the perceived fair value price.

FOR INFORMATION ONLY

Since 2013, all preferred shares issued by Canadian banks have been structured as non-viability contingent capital (NVCC), so that they qualify as Tier 1 Capital as defined by the Office of the Superintendent of Financial Institutions (OSFI). For a bank, capital is essentially the book value of its equity or the difference between its assets and liabilities. Tier 1 capital includes the book value of common shares, retained earnings as well as certain other equity securities. The designation of preferred shares as NVCC means that it is possible for OSFI to force the conversion of the preferred shares into common shares of the bank upon certain triggering events that require the bank to be recapitalized in periods of extreme distress.

In 2020, OSFI accepted a new type of debt security, called a liquid recourse capital note (LRCN), as Tier 1 Capital. These securities rank pari passu with the banks' preferred shares. They have a fixed term, a fixed interest rate that resets every five years to the 5-year Government of Canada bond yield plus a spread, and can be called by the issuer on every reset date. These features make them like rate-reset preferred shares. But, as a debt security, the interest payable on LRCNs is tax deductible by the bank, making them more advantageous to issuers from a cost of capital perspective.

Liquid recourse capital notes can be purchased by institutional investors only, but they are an attractive alternative to federally regulated banks that are subject to OSFI's capital requirements. Ultimately, they may affect the supply of preferred shares from these important issuers.

Preferred Shares

What are the key features, unique benefits, and risks of the various types of preferred shares? *Complete the online learning activity to assess your knowledge.*

Stock Indexes and Averages

5 | Summarize the important stock indexes and averages.

Stock indexes or averages are indicators used to measure changes in a representative grouping of stocks, such as the **S&P/TSX Composite Index** or the Dow Jones Industrial Average (DJIA). These indicators are important tools, and are used for the following purposes:

- Gauge the overall performance and directional moves in the stock market.
- Enable portfolio managers and other investors to measure their portfolio's performance against a commonly used yardstick within the stock market.
- Create index mutual funds.
- Serve as underlying interests for options, futures, and exchange-traded funds.

A stock index is a time series of numbers used to calculate a percentage change of this series over any period of time. Most stock indexes are value-weighted and are derived by using the total market value (i.e., market capitalization) of all stocks used in the index relative to a base period. The total market value of a stock is found by multiplying its current price by the number of shares outstanding.

Did You Know?

Many organizations that construct indexes have additional construction rules for the indexes they publish. For example, most of the S&P market capitalization-weighted indexes are float-adjusted. The **float** refers to common shares issued to the public that are available for trading by investors and excludes those shares held by company officers, directors, or investors who hold a controlling interest in the company. A float-adjusted index means the index calculation only reflects those shares that are considered to be part of the float.

Each day, the total market value of all stocks included in the series is calculated, and this value is compared to the initial base value to determine the percentage change in the index.

EXAMPLE

The S&P/TSX Composite Index closed at a value of 15,562. A year later, the same index closed at a value of 16,385. The change in the index translates into a gain of 5.29% for the year—calculated as follows:

$$\frac{(16{,}385 - 15{,}562)}{15{,}562} \times 100$$

In a value-weighted index, such as the S&P/TSX Composite Index or the S&P 500, companies with large market capitalizations dominate changes in the value of the index over time while companies with small market capitalizations have less of an impact.

A **stock average** is the arithmetic average of the current prices of a group of stocks designed to represent the overall market or some part of it.

Within a stock index, each stock has a relative weight based on the stock's market capitalization. In contrast to a market-weighted stock index, stocks included in an average are composed of equally weighted items (i.e., no specific weights are applied when constructing the average). A stock's relative weight within an index can change every day, whereas a stock's weight within an average is always the same. However, stock averages are price-weighted, which means that movements in the average are tied directly to changes in the prices of the various stocks included in the average. This occurs because some prices are higher than others and will naturally have a greater influence on the average as a whole.

EXAMPLE

Even though no specific weights are applied when constructing the average, a stock that trades at $100 per share and falls by half to $50 will have a greater impact on the average than a stock that trades at $10 per share and drops by half to $5.

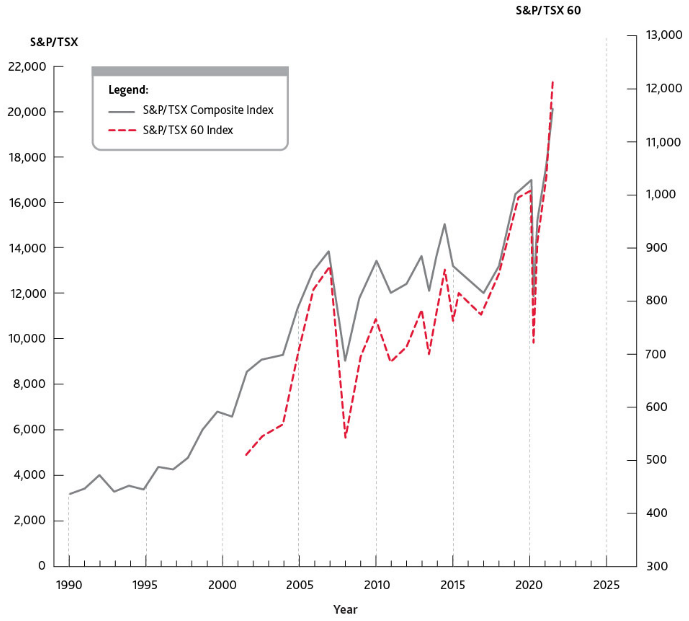
Canadian Market Indexes

In Canada, the Toronto Stock Exchange (TSX) and the TSX Venture Exchange compile and publish indexes of stock prices for a variety of industry classifications. These indexes, their dividend yields, and the price-to-earnings ratios based on the S&P/TSX Composite Index can be found in the *TSX Monthly Review, the Bank of Canada Review*, and in financial newspapers in Canada and elsewhere.

THE S&P/TSX COMPOSITE INDEX

The Toronto Stock Exchange began its first stock price indexes in 1934. Many changes and revisions have been made to the index over the years. Figure 8.2 illustrates the growth of the market since 1990. The recent sharp decline in Figure 8.2 reflects the market reaction to the worldwide pandemic.

Figure 8.2 | S&P/TSX and S&P/TSX 60 indexes



Source: Bloomberg

The S&P/TSX Composite Index measures changes in the market capitalization of the stocks in the index. A stock's weight within the index changes if its price or the number of shares outstanding changes. The index has a floating number of stocks.

To be included in the index, a stock must meet specific criteria based on price, length of time listed on the exchange, trading volume, capitalization, and liquidity.

The stocks included in the S&P/TSX Composite index are also classified by industry, based on the Global Industry Classification Standard. This standard was developed jointly by S&P and MSCI (Morgan Stanley Capital International Inc.) for use in all their indexes and is accepted worldwide. An index has been created for each sector. Table 8.3 lists the 11 major industry sector indexes within the S&P/TSX Index.

Table 8.3 | 11 Sectors of the S&P/TSX Composite Index

Consumer Discretionary
Consumer Staples
Energy
Financials
Health Care
Industrials
Information Technology
Materials
Real Estate
Communication Services
Utilities

Based on market capitalization, some sectors are weighted more heavily than others in the S&P/TSX Composite Index. For example, Financials and Energy account for more than half of the weight on the index. However, Health Care, Utilities, and Information Technology account for approximately 5% combined.

To interpret the indexes, it is important to understand the distinction between **point changes** and **percentage changes**. Based on the starting level of 250 for an index, for example, a 1% change in the index is equivalent to 2.5 index points (calculated as 0.01 × 250). Similarly, a 1% change in other widely quoted indexes is not the same in terms of net point changes. For example, a 1% change is approximately:

- 105 points when Tokyo's Nikkei 225 is trading around 10,500 (calculated as 0.01 × 10,500)
- 10 points when the S&P 500 is trading around 1,000 (calculated as 0.01 × 1,000)

Therefore, as indexes move up and down, the percentage change is a more accurate reflection of market performance than net point changes. Also, when a percentage change in the S&P 500 is compared to a percentage change in the S&P/TSX, currency values should be taken into account. An investment in the S&P 500 is in U.S. dollars, whereas an investment in the S&P/TSX would be made in Canadian dollars.

THE S&P/TSX 60 INDEX

The **S&P/TSX 60 Index** includes the 60 largest companies that trade on the TSX as measured by market capitalization and is broken down into 11 sectors that cover all S&P/TSX Index subgroups. All stocks listed on this index must also be included in the S&P/TSX Composite Index.

THE S&P/TSX VENTURE COMPOSITE INDEX

The **S&P/TSX Venture Composite Index** is a Canadian benchmark index for the public venture capital marketplace. Managed by Standard & Poor's, it is a market capitalization-based index meant to provide an indication of performance for companies listed on the TSX Venture Exchange.

The index does not have a fixed number of companies and is revised quarterly based on specific criteria for inclusion and maintenance policies. TSX Venture Exchange-listed companies are eligible for inclusion in the S&P/TSX Venture Composite Index if they are incorporated under Canadian federal, provincial or territorial jurisdictions and represent a relative weight of at least 0.05% of the total index market capitalization. Stocks eligible for inclusion must generally be listed on the TSX Venture Exchange for at least 12 full calendar months as of the effective date of the quarterly revision.

U.S. Stock Market Indexes

THE DOW JONES INDUSTRIAL AVERAGE

Although normally around 2,800 issues trade daily on the New York Stock Exchange, the most publicity is given to the trading performance of the 30 issues that make up the Dow Jones Industrial Average.

The DJIA has been criticized because so few companies are included in this average, which means that it is not a truly representative indicator of broad market activity. Also, because it is price-weighted, when a higher-priced stock rises, it may distort the average. Even with the DJIA's shortcomings, many people still use it as if it were an overall indicator of market performance.

The DJIA is calculated by adding the prices of each of the 30 issues in the average and dividing by a specially calculated divisor. The divisor was initially the number of stocks in the average – originally 14 (12 railways and 2 industrials). Because of obvious distortion through stock splits (a 2-for-1 split would mean a $100 share would become $50 in the average after the split), the divisor was adjusted downward for each split.

It is important to view the DJIA in perspective. Because it comprises such a small number of components, day-to-day changes may appear more dramatic than they actually are. Also, since the DJIA is composed of blue-chip stocks with a typically lower risk profile, it tends to underperform the broader market over the longer term.

THE S&P 500

Because the Dow Jones average is not completely satisfactory as an indicator of broad market performance, other market indexes have been developed, such as the Standard & Poor's 500 Stock Composite Index. This index is based on a large number of industrial stocks, some financial stocks, some utility stocks, and a smaller number of transportation stocks, which are weighted in the index by their market capitalization. Since the S&P 500 is weighted by market capitalization, more heavily weighted stocks have a greater effect on the value of the index.

The S&P has become the main gauge for measuring the investment performance of institutional investments in the United States because of its broad industry coverage and the method of weighting the index. Many institutional investors have created investment funds that track the S&P 500.

Other U.S. Stock Market Indexes

This list is by no means exhaustive, but it includes the most well-known indexes. Many other U.S. indexes exist.

The NYSE Composite index
This composite index is a market capitalization index that includes all the listed common equities on the New York Stock Exchange. There are additional indices for industrial, transportation, utility, and financial corporations.

NYSE American index
This market-weighted index is based on all the stocks listed on the NYSE American exchange. The NYSE American is a leading exchange for small-cap companies.

The NASDAQ Composite Index
This index is a market-weighted index of more than 3,300 stocks that are traded over the counter. This index is dominated by smaller capitalization companies. Its market capitalization is about 30% of the NYSE market capitalization.

The Value Line Composite index
Value Line is a composite index of more than 1,600 stocks that is calculated by taking an average of the daily percentage change in each stock within the index. This equal-weighted index was created by Wilshire Associates and is the broadest available barometer of all the U.S. indexes, and includes companies that are listed on the NYSE, NASDAQ, NYSE American, and the TSX.

International Market Indexes and Averages

As the economy becomes more global, it makes sense for investors to diversify their equity portfolios by investing not only in various industries and stocks but in different countries. As the economies of more and more countries mature, their equity markets grow in size and sophistication, and it becomes easier for foreign investors to enter.

Most funds that invest outside Canada prefer the large, liquid global stock markets, some of which are noted below.

Nikkei Stock Average (225) Price Index
This is the Tokyo Stock Exchange price average. The average is calculated like the Dow Jones average and is updated every 15 seconds. The index is well known both inside and outside Japan.

The FTSE 100 Index
This index consists of the 100 largest listed companies listed on the London Stock

Exchange and is one of the most widely followed indexes in the United Kingdom. It is calculated using the market capitalization of the stock and is recalculated on a minute-by-minute basis.

The DAX Performance Index consists of 30 major Frankfurt Stock Exchange blue-chip stocks and is the most widely followed index on the German securities market. The index is weighted by market capitalization. Dividends and income from subscription rights are reinvested in the index.

The CAC 40 Index is based on 40 of the largest 100 companies listed on the Paris Stock Exchange. It is calculated on a market capitalization basis.

The Swiss Market Index is Switzerland's blue-chip index, which makes it the most important in the country. The index is made up of 20 of the largest and most liquid stocks on the Swiss market, ranked by market capitalization.

However, in the past 25 years, interest has developed in riskier, more exotic markets such as those of China, India, Turkey, Sri Lanka, Korea, and Mexico, which also have stock indexes.

Environmental, Social, and Governance Indexes

Indexes that incorporate ESG criteria are composed of companies deemed to be strong ESG performers by a third-party research firm. The MSCI Canada ESG Leaders Index and the MSCI World ESG Leaders Index are examples of ESG indexes.

MSCI Canada ESG Leaders Index This index consists of large and mid-cap companies in the Canadian market with strong ESG ratings. The MSCI Canada ESG Leaders Index has consistently outperformed the broader MSCI Canada Index since 2007. The market downturn in the first quarter of 2020 affected all stocks, but the Canada ESG Leaders Index saw less of a downturn than the broader Canadian market.

MSCI World ESG Leaders Index This index is a market capitalization-weighted index that provides exposure to companies with strong ESG ratings while excluding companies whose products have negative social or environmental impacts. The index is designed for investors seeking a broad, diversified sustainability benchmark with a relatively low tracking error to the underlying equity market. From September 2007 to January 2022, the MSCI World ESG Leaders Index has slightly outperformed the broad-based MSCI World Index.

KEY TERMS & DEFINITIONS

Can you read some definitions and identify the key terms from this chapter that match? *Complete the online learning activity to assess your knowledge.*

Summary

In this chapter, we discussed the following aspects of common and preferred shares:

- The benefits of common share ownership can include capital appreciation, dividend income, voting privileges, favourable tax treatment, easy marketability, access to the board of directors, and limited liability.
- ESG issues are some of the most important drivers of change in the world today. ESG considerations include climate change, water scarcity, Indigenous and community relations, and diversity and inclusion.
- A stock split increases the number of shares outstanding, whereas a consolidation

reduces the number of shares outstanding. In both cases, the market price changes, but the overall value of the investors' share of ownership remains the same.

- In terms of the right to receive payment if a company is liquidated, preferred shareholders rank below the company's creditors and above the company's common shareholders.
- Canadian Depositary Receipts give Canadians access to U.S. and global companies, but in Canadian dollars and in fractional amounts that trade on the NEO Exchange. Trading in CDRs removes the impact of fluctuating exchange rates and gives Canadians access to high-priced stocks that would normally be inaccessible to regular retail investors.
- Preferred shareholders are usually entitled to a regular dividend payment, subject to the discretion of the board of directors. Because of this income stream, most preferred shares are treated like a type of fixed-income security.
- Preferred shares rank ahead of common shareholders but behind creditors and debtholders in their claim to assets. In almost all cases the charters of companies provide that no dividends are to be paid to common shareholders until preferred shareholders have received full payment of the dividend to which they are entitled.
- Fixed-rate perpetual preferred shares pay a fixed quarterly dividend and have no stated maturity date. Like almost all Canadian preferred shares, however, issuers have the right to call or redeem fixed-rate perpetual preferred shares on established dates at prices set at the time of issue.
- Floating-rate preferred shares pay a dividend that adjusts, or floats, based on either a percentage of the Canadian Bank Prime Rate or the yield on 3-month Government of Canada Treasury bills plus a spread.
- Fixed-reset preferred shares are preferred shares with fixed dividend rates that periodically reset according to a formula or process outlined at the time the shares are issued.
- Companies issue preferred for the following reasons:
  - It is not feasible for the company to market a new debt issue because existing assets are already heavily mortgaged.
  - Market conditions are temporarily unreceptive to new debt issues.
  - The company has enough short- and long-term debt outstanding.
  - The directors are reluctant to assume the legal obligations to pay interest and principal.
  - The directors decide that paying preferred share dividends will not be onerously expensive.
- Investors typically buy preferred shares for their higher yields than bond yields, preferential tax treatment, and portfolio diversification.
- Investing in preferred shares carries the following risks:
  - Interest rate risk
  - Credit risk
  - Call risk
  - Extension risk
  - Liquidity risk

Review Questions

Now that you have completed this chapter, you should be ready to answer the Chapter 8 Review Questions.

Frequently Asked Questions

If you have any questions about this chapter, you may find answers in the online Chapter 8 FAQs.

Equity Securities: Equity Transactions

Chapter Overview

In this chapter, you will learn about the characteristics of equity transactions. First, we will discuss the difference between a cash account and a margin account, and between long and short positions. We will then discuss in detail margin account transactions and short selling rules, techniques, and risks. You will also learn how trades are conducted and settled, and finally how securities are bought and sold through different types of orders.

learning objectives	content areas
1 | Define cash and ma accounts.	**Cash Accounts and Margin Accounts**
2 | Describe the proces establishing long margi and short margin positio	**Margin Account Transactions**
3 | Interpret the impact price changes have on long and short margin requirements	
4 | Describe the trading settlement procedures f equity transactions	**Trading and Settlement Procedures**
5 | Distinguish among th types of buy and sell or	**How Securities Are Bought and Sold**

Key Terms

Key terms are defined in the Glossary and appear in **bold** text in the chapter.

cash account

confirmation

day order

good til order

limit order

long position

margin

margin account

Margin Account Agreement Form

margin call

market order

on-stop buy order

on-stop sell order

professional (PRO) order

settlement date

short position

short selling

stop buy order

stop loss order

Introduction

By now, you should have a good understanding of the different types of securities that trade in the market. In this chapter, we turn our attention to the mechanical process by which investments are acquired, held, and sold.

On the surface, buying or selling a stock on an exchange seems fairly straightforward. However, there is more to trading than simply calling an investment dealer or self-directed broker and placing a buy or sell order. For example, an investor has the option of buying shares on margin or short selling the stock. The investor can also place a limit price on the trade, place the trade at the market, or add other conditions to the purchase.

These considerations are important to the decision-making process and, ultimately, to the choice of investment strategy. Of course, there are risks, advantages, and disadvantages to the chosen trading strategy. This chapter focuses on equity transactions, including margin, short selling, and the various buy and sell orders investors use to trade stocks.

Cash Accounts and Margin Accounts

1 | Define cash and margin accounts.

A securities transaction through a dealer member must be made in either a **cash account** or a **margin account**.

- Clients with regular cash accounts are expected to make full payment for purchases or full delivery for sales on or before the **settlement date**. The settlement date is specified in the contract, generally according to the following industry rules:

  - Government of Canada Treasury bills—on the day that the transaction takes place
  - All other securities—two business days after the transaction takes place

- In contrast, margin accounts are used by clients who wish to buy or sell securities on partial credit. In such cases, the client pays only a portion of the purchase price and the investment dealer lends the balance to the client, charging interest on the loan.

The difference between cash accounts and margin accounts is important. When a client opens a cash account, the investment dealer does not grant credit. The explicit understanding is that the client will pay for the security in full on the settlement date. With a margin account, on the other hand, it is understood that the firm is granting credit based on the market value and quality of the securities held in the account.

Long Positions and Short Positions

Throughout this chapter, we refer to long and short positions. A **long position** represents actual ownership in a security. In contrast, a **short position** is created when an investor sells a security that the investor does not own.

EXAMPLE

An investor buys common shares to initiate a long position in a stock and must pay for the stock purchase by the settlement date. To close the long position, he sells the stock in the market.

Another investor, with the dealer member's permission, sells securities she does not own to initiate a short position. The borrowed shares are delivered to the purchaser. She must leave the proceeds of the sale in her margin account and make an additional margin deposit in case the value of the securities rises. To close the short position, she buys back the stock from the market.

Margin Account Transactions

2 | Describe the process for establishing long margin and short margin positions.

3 | Interpret the impact price changes have on long and short margin requirements.

Margin accounts require only partial payment for a purchase of securities. The investment dealer lends the client the unpaid portion of the market value of the securities at prevailing interest rates. The client must make an initial deposit of a specified portion of the value of the securities. Interest on a margin loan is calculated daily on the debit balance (i.e., the outstanding balance) in the account and charged monthly. Investment dealers usually charge interest based on the rates the clients are charged on their chartered bank loans.

The word **margin** refers to the amount of funds the investor must personally provide. The margin plus the loan provided by the dealer member together make up the total amount required to complete the transaction.

Two types of margin positions are possible:

- A long margin position allows investors to partially finance the purchase of securities by borrowing money from the dealer. Investors buy on margin with the expectation that the price of the security will rise.
- A short margin position allows investors to sell borrowed securities in the expectation that the price will fall, allowing the investor to buy back the shares at a lower price for a profit.

Not every dealer member allows margin accounts, and those that do must obtain an authorized **Margin Account Agreement Form** from the client before any business is transacted.

Long Margin Accounts

The amount of credit that a dealer member may extend to its clients for the purchase of securities (both listed and unlisted) is strictly regulated and enforced by IIROC. Examiners conduct spot checks, in addition to regular field examinations, to ensure that the firms keep clients' accounts properly margined.

Table 9.1 shows the minimum margin requirements that dealer members require from clients for long positions in equity securities listed on a recognized exchange in Canada.

Table 9.1 | Margin Required for Long Positions *(For information only)*

On Listed Equities Selling	**Minimum Margin Required**
At $2.00 and over	50% of market value
At $1.75 to $1.99	60% of market value
At $1.50 to $1.74	80% of market value
Under $1.50	100% of market value (i.e., no loan value)
Securities Eligible for Reduced Margin*	30% of market value

* Note that these margin amounts are determined by IIROC. Dealer members may choose to set more stringent requirements. For example, many firms do not allow clients to take margin positions on stocks that trade under $3.

EXAMPLE

To purchase shares on credit from a dealer when the shares trade at $1.85 per share, the dealer may loan a maximum of 40% of the market value of the shares. Therefore, the investor's margin would be 60% of the market value.

If, instead, the purchase was for shares that trade at $1.55 per share, the dealer may loan a maximum of 20% of the market value of the shares. Therefore, the investor's margin would be 80% of the market value.

IIROC produces a quarterly list of "securities eligible for reduced margin". Inclusion in the list is restricted to those securities that demonstrate both sufficiently high liquidity and sufficiently low price volatility, based on specific price risk and liquidity risk measures.

Margining Long Positions

When a long position is established on margin, sufficient funds (or securities with excess loan value) must be in the account to cover the purchase. The dealer member lends some of these funds to the client, and the client is responsible for the balance. Therefore, margin refers to the amount put up by the client. The minimum margin required equals the initial cost of the transaction minus the loan amount.

The sum of the margin and the loan must always be equal to the original purchase price, at a minimum. If the price of the security falls, the value of the loan drops accordingly. The client must then immediately provide additional funds in the account to cover the shortfall up to the original purchase price. This requirement to deposit additional money is known as a **margin call**.

If, on the other hand, the security price rises, the loan amount rises accordingly, and the client has access to additional funds in the account immediately. This additional amount is called *excess margin*.

The margin requirement is always the difference between the original purchase price and the loan, as illustrated in the following examples. (Note that, in these examples, commissions are excluded from the calculations.)

Note: The margin calculations in the examples that follow are for information only. However, by working through these examples, you will strengthen your understanding of how long margin accounts in general are affected by changing stock prices. (Note that commissions are excluded from the calculations.)

EXAMPLE

(For information only)

Assume that a client buys 1,000 shares of listed ABC Company on margin at a loan rate of 50%. The security sells for $25 per share. In other words, the client puts up $12,500 to buy $25,000 of ABC shares. The firm lends the remaining half of the money to the client.

	(A) Total cost to buy ABC shares	$25,000
Less:	Maximum loan put up by the firm (50% of $25 × 1,000)	$12,500
Equals:	(B) Margin put up by the client	$12,500

Now let's consider two scenarios:

- In Scenario 1, the price of ABC stock declines to $22.
- In Scenario 2, the price of ABC stock increases to $29.

Scenario 1: Margin Call

	Original cost of ABC shares (A above)	$25,000
Less:	Member's revised maximum loan (50% of $22 × 1,000)	$11,000
Equals:	New margin requirement	$14,000
Less:	Client's original margin deposit (B above)	$12,500
Equals:	Net margin deficiency (for which a margin call is issued to the client)	$1,500

In this scenario, with the price of the security falling to $22, the amount of money the dealer is willing to lend drops to $11,000 (50% of the market price). Because the original purchase price must be in the account at all times, the margin requirement has increased to $14,000. The client had originally put up an initial margin of $12,500, which means that there is now a $1,500 shortfall. The firm issues a $1,500 margin call, which means that the client must deposit this amount immediately into the account.

Scenario 2: Excess Margin

	Original cost of ABC shares (A above)	$25,000
Less:	Member's revised maximum loan (50% of $29 × 1,000)	$14,500
Equals:	New margin requirement	$10,500
Less:	Client's original margin deposit (B above)	$12,500
Equals:	Excess margin in account	$2,000

In this scenario, with the price of the security rising to $29, the amount of money the firm is willing to lend rises to $14,500 (50% of the market price). This increase reduces the margin requirement to $10,500 ($25,000 – $14,500 = $10,500). Because the client put up an initial margin of $12,500, there is now an excess margin of $2,000 in the account for the client to use as desired.

The excess $2,000 can be used as margin toward the purchase of another security, or it can be withdrawn from the account. However, it is not an idle amount of cash that can be removed without consequence. The client is still borrowing money from the dealer member, on which interest is charged.

If the excess margin is left in the account, the borrowed amount is still $12,500 (calculated as $25,000 – $12,500), which was loaned initially by the dealer. What has changed is the amount of money that the dealer is willing to lend. Because the collateral value of the shares has increased, the member is willing to lend $14,500, instead of the initial $12,500. By withdrawing the $2,000 margin surplus, the client is choosing to borrow (and thus pay interest on) this additional amount.

Margin Risks

It is important to recognize that borrowing funds to invest involves more risk than simply buying and paying for a security in full from a cash account. Here are some of the risks associated with using a margin account:

Margin increases market risk	Borrowing to buy securities magnifies the outcome, either in a positive or negative way.
Loan and interest must be repaid	The client must pay interest during the period that the security is margined and must repay the loan at the end, regardless of the value of the security.
Margin calls must be paid without delay	If the security has fallen in price and the client fails to meet the margin call, the dealer can sell the security without notice or consent, and the client will suffer a loss.

Clients with margin accounts should avoid the practice of margining close to prevailing price limits (i.e., keeping a minimum amount of margin on deposit in the account). Additional funds or securities with excess loan value on deposit protect against the risk of a margin call after a minor adverse price fluctuation. The cushion of protection also reduces the possibility that the dealer will be forced to *sell out* the margin account in the event of a drastically adverse price fluctuation.

Short Margin Accounts

Short selling is defined as the sale of securities that the seller does not own and can only be done in a margin account. Profits are made whenever the initial sale price exceeds the subsequent purchase cost. This is unlike a long position, where the investor purchases a security and then holds it in the hope of eventually selling it at a higher price.

With short selling, the order of the transactions is reversed: the investor sells the security first, and then waits in the hope of eventually buying it back at a lower price. Because the seller does not own the securities sold, the seller in effect creates a short position, during which the seller still owes the securities. The subsequent purchase eventually compensates for this deficit.

Short selling is generally carried out in the belief that the price of a stock is going to fall, and the investor who sells it short will be able to buy it back later at a lower price. If that subsequent purchase is lower than the investor’s original sale price, the investor has made a profit.

EXAMPLE

A client contacts you, his investment advisor, wishing to short a security. Your client declares his intention to sell short at $10 per share. Your firm proceeds to lend the securities to be shorted to your client, which the client then sells into the market. The process is similar to the way a long position is sold. The only difference is that the short sale must be declared at the time of the trade.

The proceeds of the short sale are then deposited in your client’s account. The client then deposits enough margin into the account ($5 per share), in addition to the sale proceeds, to bring the account balance up to the required minimum.

After the short position is established, your client then waits for an opportune moment to cover the sale of the securities with a purchase when the price is lower. Of course, the price can also rise, which could lead to incurring a loss. Therefore, both the firm and your client keep regular monitoring of the position.

Your client eventually purchases the stock originally sold short, and the stock is returned to your firm.

In some circumstances, your firm could require the client to return the security. If another lender is not available, the client is forced to buy back the security at the current price. If the current price is higher than the original sale, your client will be forced to suffer a loss.

Short selling has an element of leverage because the investor borrows stock from the dealer and puts up less money than the minimum required balance. Therefore, short selling is considered riskier than purchasing an outright long position. Theoretically, short selling has unlimited risk because the security that the investor sold short could potentially rise to infinity. Because of the high risk, some basic precautions are available to the investment advisor for clients who wish to short a security. We will discuss in detail these precautions later in this chapter.

Figure 9.1 illustrates a brief version of the short selling process.

Figure 9.1 | **Short Selling—Simplified Steps**

Step 1	Your client calls you and instructs you to sell 10,000 shares of ABC short.
Step 2	Your firm lends the ABC shares to your client, who immediately instructs you to sell them into the market.
Step 3	The proceeds from the short sale are deposited in the client’s account.
Step 4	The client deposits the required margin into the account.
Step 5	The share price of ABC falls, and your client wants to close the position. You buy ABC back on the client’s behalf at the lower price and return the stock to your firm.

Did You Know?

So, why does an investment dealer agree to lend securities to a new client for short selling? The investment dealer gains a specific benefit in the process. As security for the loaned securities, the investment dealer is free to use the money put up by the short seller in the firm's business or in interest-earning activities.

Margining Short Positions

In contrast to a long position, margin is always required for a short position because of the risks involved. In a short sale, the client borrows the stock from the dealer member, but no money is loaned to the client. Instead, the client deposits additional money into the account to cover potential losses from the short sale.

Table 9.2 shows the minimum margin requirements for short sales.

Table 9.2 | Minimum Margin Requirement for Short Sales *(For information only)*

Listed Equities Selling	**Margin Required**
At $2.00 and over	50% of market value
At $1.75 to $1.99	60% of market value
At $1.50 to $1.74	80% of market value
At $0.25 to $1.49	100% of market value
Under $0.25	$0.25 per share
Securities eligible for reduced margin	30% of market value

EXAMPLE

To short common shares at a price of $5.00 per share, the investor must deposit a margin of 50% of the market value of the shares along with the proceeds of the short sale. In other words, the investor must have 150% of the market value of the shares in her account.

If, instead, the investor shorted shares priced at $1.55 per share, she must deposit a margin of 80% of the market value of the shares along with the proceeds of the short sale. In other words, the investor must have 180% of the market value of the shares in her account.

Note: The margin calculations in the examples that follow are for information only. However, by working through these examples, you will strengthen your understanding of how long margin accounts in general are affected by changing stock prices. (Note that commissions are excluded from the calculations.)

EXAMPLE

(For information only)

In this example, the margin required to sell short is illustrated in three different scenarios.

Assume that a client wishes to sell short 100 shares of listed FED Company Ltd. at its current market price of $5.00. The minimum account balance required is the proceeds of the short sale plus 50% of the market value, or 150%. The client must put up a margin of $250.00, as shown below.

Minimum account balance required: 150% of $5.00 × 100 shares	$750.00
Less: Proceeds from short sale 100 × $5.00	$500.00

Equals: Minimum margin required (50% of the market value)	$250.00

Scenario 1

Assume that, later on, the price of FED's shares declines to $4.00. The client now has more margin in the account than the required minimum.

Minimum account balance required: 150% of $4.00 × 100 shares	$600.00
Less: Proceeds from short sale 100 × $5.00	$500.00
Equals: Margin required	$100.00

Because the client has already deposited a margin of $250.00, the account now has excess margin of $150.00. This amount may be withdrawn, used to purchase more securities, or left in the account to cover possible margin calls (should FED's price begin to rise).

Scenario 2

Assume that FED's shares continue to decline to $1.60. The account balance required is now governed by a different category.

Minimum account balance required: 180% of the market value (consisting of 80% margin plus 100% of the proceeds of the sale)	$288.00
Less: Current account balance: Proceeds from short sale ($500) plus margin already deposited ($250)	$750.00
Equals: Minimum margin required ($1.60 x 100 shares x 180%)	nil

Because the account balance required is less than the short sale proceeds, no additional margin is required.

Scenario 3

If the price of FED's shares advanced to $6.00 instead of declining, the client would receive a margin call, as shown below.

Minimum account balance required (based on current price of shorted security): 150% of $6.00 × 100 shares	$900.00
Less: Proceeds from the short sale (excluding commission), based on the original price of the shorted security: 100 × $5.00	$500.00
Equals: Minimum margin required	$400.00
Less: Amount already deposited	$250.00
Equals: Margin deficiency (for which a margin call is issued to the client)	$150.00

Because the price rises to $6, the new margin required is now $400. Since the initial deposit made by the client was $250, a margin call is issued to cover the margin deficiency.

PROFIT OR LOSS ON SHORT SALES

The profit or loss on a short sale transaction is calculated in the same way as on a long transaction. It is simply the difference between the purchase and sale prices, or between the sale proceeds and the purchase cost.

EXAMPLE

(For information only)

In this example, the profit or loss on a short sale is illustrated in two different scenarios.

Scenario 1

Assume that a client sells short 100 shares of FED Company Ltd. at its current market price of $5.00. The price of FED's shares later declines to $1.60, and the client wishes to calculate the profit, on paper.

Proceeds of the short sale	$500.00
Less: Cost of buying 100 FED in the market at $1.60 per share, should the client	$160.00

	decide to cover the short sale	
Equals:	The client's pre-tax profit on the short sale	$340.00

Because the price has dropped and the client is able to purchase the shares at a lower price than they were previously sold at, there is a profit, on paper.

Scenario 2

Assume instead that the price of FED's shares rises to $6.00, and the client wishes to calculate the loss, on paper.

	Proceeds of the short sale	$500.00
Less:	Cost of buying 100 FED in the market at $6.00 per share, should the client decide to cover the short sale: $600.00	$600.00
Equals:	The client's loss on the short sale	$100.00

Because the price has risen, there is a loss rather than a profit, on paper. If the position were covered at the current price, the price of the purchase would be higher than the price of the sale.

TIME LIMIT ON SHORT SALES

There is no limit on the amount of time that a short sale position may be maintained, provided that the stock does not become delisted or worthless. As well, the position remains open as long as equivalent amounts of the shorted security can be borrowed by the short seller's dealer, and as long as adequate margin is maintained in the short account. For short sales of listed securities, borrowing can be arranged between dealers to facilitate the delivery required by the short sale.

COVERING A SHORT POSITION

In some cases, the short seller may be unable to borrow enough stock from the investment dealer to maintain or carry a short position. In such cases, the client must buy the necessary shares to cover the short sale. This transaction must be done regardless of the short seller's intention to buy back the shorted security or market price of the shorted security.

There is also an issue with short selling shares that are thinly traded. It can be difficult to borrow sufficient stock with low marketability to maintain a short position for a prolonged period. Short sellers generally look for shares of companies that have a large number of shares outstanding and that are widely held by many shareholders.

DECLARING A SHORT SALE

All of the exchanges require dealer members to confirm whether a sale is a short or a long sale, upon accepting an order for the sale of a security.

Investment advisors entering an order for a short sale of a security for any client must clearly mark the sell-order ticket Short (or S), so that the trading department may process the order properly.

The Toronto Stock Exchange (TSX) and the TSX Venture Exchange compile and publicly report total short positions in applicable securities twice a month.

Risks of Short Selling

There are various risks associated with short selling. Some of these risks are summarized as follows:

Borrowing shares	It may be difficult to borrow a sufficient quantity of the security sold short to maintain the short sale.
Adequate margin	The short seller must maintain adequate margin in the short account as the price of the shorted security fluctuates.
Liability	The short seller is liable for any dividends or other benefits paid during the period that the account is short.
Buy-in requirements	If adequate margins cannot be maintained by the client, the investment dealer must buy back the stock to close the short sale. Similarly, if the borrowed stock is called by its owner, the client may be unable to borrow other stock to replace it.
Insufficient information	It is difficult to obtain up-to-date information on total short sales on a security. (The exchanges do not report short positions on a daily basis, and no data is available on unlisted short sales.)
Price action	The price of a shorted security may become volatile when a number of short sellers try to cover their short sales at the same time, creating a buying rush.
Unlimited risk	There is a possibility of unlimited loss if a shorted stock starts a dramatic rise in price. Unlike a typical investor who can lose no more than the security's purchase price, there is no maximum to the loss that a short seller can incur, because there is no limit to how high the price of a stock can advance.
Regulatory risk	There is a risk that regulators may ban short selling for certain types of stocks. The most obvious example of this was during the credit crisis. The SEC, for example, banned short sales of banks and other financial institutions. When such a ban is put in place, short sellers may be forced to cover their positions (creating an upward spike in prices) at a loss.

Trading on Margin

What are the key differences between buying long on margin and selling short? How well do you understand margin strategies from an investment perspective? *Complete the online learning activity to assess your knowledge.*

Trading and Settlement Procedures

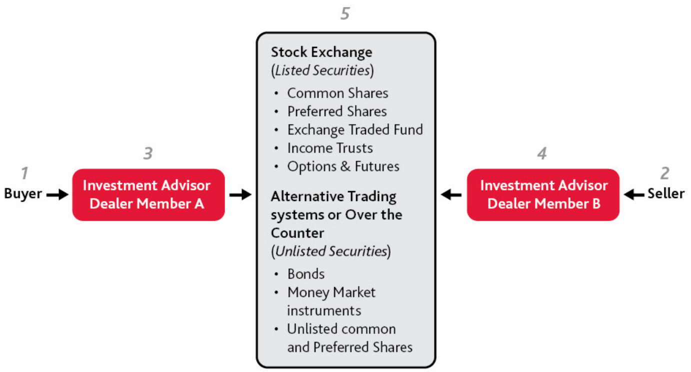
4 | Describe the trading and settlement procedures for equity transactions.

Stock exchange trades may involve the investment dealer acting as agent or as principal. Our description of the roles that investment dealers may play focuses on a traditional trade involving two customers and two investment dealers acting as agents.

Trading Procedures

Figure 9.2 shows a simplified securities transaction in a retail setting.

Figure 9.2 | A Retail Securities Transaction


5
Stock Exchange
(Listed Securities)
• Common Shares
• Preferred Shares
• Exchange Traded Fund
• Income Trusts
• Options & Futures
Alternative Trading systems or Over the Counter
(Unlisted Securities)
• Bonds
• Money Market instruments
• Unlisted common and Preferred Shares
3
Investment Advisor Dealer Member A
4
Investment Advisor Dealer Member B
1
Buyer
2
Seller

Referring to the diagram in Figure 9.2, assume that XYZ's common shares are listed for trading on a stock exchange. No matter which exchange the trade takes place on, the major steps are the same.

All trades involve both a buyer and a seller (positions 1 and 2 in the diagram) who may live next door to, or across the country from, each other. Perhaps after consultation with their respective investment advisors (positions 3 and 4), the buyer has decided to acquire 100 XYZ shares and the seller wishes to sell 100 XYZ shares in his possession. Both phone their investment advisors for a current price quotation. Their advisors learn, through communication links with the exchange, that XYZ common is currently $10.50 bid and $10.75 asked. Both advisors report this quotation to their clients.

The prospective buyer now knows that the lowest price at which anyone is currently willing to sell one standard trading unit (100 shares) of XYZ stock is $10.75 a share. The seller now knows that the highest per share price anyone is currently willing to pay for a standard trading unit is $10.50. A sale is possible if the buyer is willing to pay the seller's price or if the seller is willing to accept the buyer's price.

The two clients then instruct their investment advisors to get the best possible current price for XYZ stock (a **market order**). The orders are relayed to the stock trading departments at each dealer member.

The exchange's data transmission system reports the trade over the exchange's ticker. It also provides the buying and selling dealers with specific details of the trade, such as the time of the trade and the identity of the other firm. Details are relayed to the investment advisors who originated the transactions, and the advisors phone their clients to confirm the transaction. Each dealer mails a written **confirmation** to its client that day or the next business day at the latest.

Settlement Procedures

Once a transaction has occurred, the buyer and seller each receive a confirmation and must settle the transaction. The buyer's confirmation shows details of the purchase and the amount payable, including commission. The amount will be withdrawn from the client's account, if the buyer has sufficient funds on deposit with the firm (either for payment in full, with a cash account, or for initial margin requirements, in a margin account). Otherwise, the buyer must provide sufficient funds by the settlement date (i.e., two business days after the trade date). The buyer's firm then makes payment for the purchase to the seller's firm.

The seller's confirmation also shows details of the sale, as well as the amount to be received by the seller after commission is deducted.

Did You Know?

In Canada, stock and bond certificates are not in the form of paper; they are mainly held electronically by a clearing corporation. At the end of each trading day, the clearing corporation settles all purchases and sales of stock and bonds among dealers. The entries are made in the dealer's book of record showing who owns the stocks and bonds, and who owes money to pay for them.

How Securities Are Bought and Sold

5 | Distinguish among the types of buy and sell orders.

As an investment advisor, you may be called on to execute many types of buy and sell orders that are common to both listed and unlisted trading.

Order types are generally categorized according to the following characteristics:

Duration	How long is the order valid for?
Price restrictions	Have any limits been set on the price?
Special instructions	Are there any special conditions attached to the order?
Other	For example, are there any changes to the original order?

When trading securities on the market, buyers always want to pay the lowest price possible for the stocks they want, and sellers always try to get the highest price possible for the stocks they own. This dichotomy creates two prices for a single security: a bid and an ask price. In Chapter 2 of this course, we discussed that the bid price is the highest price that a buyer is ready to pay for a stock, whereas the ask price is the lowest price that a seller will accept for the same stock. The difference between the two prices is the *bid-ask spread*.

This principle is illustrated in the following formula:

$$\text{Ask Price} - \text{Bid Price} = \text{Bid} - \text{Ask Spread}$$

You can see how this formula is applied in our examples of the different types of orders.

Types of Orders

There are various types of orders that may be involved in a stock transaction, including market, limit, day, good til, on-stop sell, on-stop buy, and professional. All of these types are discussed in detail below:

Market Order

A market order is an order to buy or sell a specified number of securities at the prevailing market price. All orders not bearing a specific price are considered market orders. Generally, the buyer can expect to pay the ask price, and the seller can expect to accept the bid price. In any case, the trader tries to obtain a lower ask (also known as offer) or a higher bid than the prevailing level. The benefit of a market order is that the investor is certain that it will be executed. However, the price is not certain, particularly in shares (or units) that are less liquid. Market orders are often best used in a liquid market, where the bid/ask spread is tight.

EXAMPLE

Market Order:

	Bid	Ask
ABC	$19.90	$20.10

"Buy 1,000 shares of ABC at market."

This order will be filled at the current ask price and the buyer will pay $20.10 for each ABC share purchased.

"Sell 1,000 shares of ABC at market."

This order will be filled at the current bid price and the seller will receive $19.90 for each ABC share sold.

Limit Order

A **limit order** is an order to buy or sell securities at a specific price or better. The advantage to a limit order is that the order will be executed only if the market reaches that price or better. The downside to a limit order is that there is no certainty that the order will be filled. Limit orders are generally used by a buyer, or seller, with a specific price point. In particular, the limit order is used in a market that is less than liquid (i.e., a market with a wide bid/ask spread).

EXAMPLE

Limit Order:

	Bid	Ask
ABC	$19.90	$20.00

"Buy 1,000 shares of ABC at $20 or less."

This order will be filled only if it can be executed at $20 or less. In this case, the order will be executed because at least one seller is ready to sell ABC shares at $20. If no time limit is specified, and if the shares remain above $20, the order will be cancelled at the end of the trading day.

"Sell 1,000 shares of ABC at $20 or more."

This order will be filled only if it can be executed at $20 or more. In this case, the order cannot currently be executed because buyers are willing to pay only $19.90.

Day Order

A **day order** is an order to buy or sell that expires at the end of the day, if it is not executed on the day it is entered. All orders are considered to be day orders unless otherwise specified.

EXAMPLE

Day Order:

"Buy 1,000 shares of ABC at $20 or less."

Because this order does not specify a time limit, the order is valid until it is filled or until the close of business on that day, whichever is sooner.

GOOD TIL ORDER

There are two **good til order** types that an investor can place: a good til date (GTD) order or a good til cancelled (GTC) order.

- A GTD order expires on a date specified by the investor.
- A GTC order expires 90 calendar days from entry on the TSX, unless the investor decides to cancel the trade sooner than the expiry date.

EXAMPLE

GTD Order:

"Sell 1,000 shares of ABC if the price reaches $20 or more on or before March 30."

This order remains open until it is filled at $20 or more, or until the close of business on March 30, whichever is first.

GTC Order:

"Sell 1,000 shares of ABC if the price reaches $20 or more, good til cancelled."

This order remains open until it is filled at $20 or more, the client cancels the order, or the order expires after 90 days, whichever is first.

ON-STOP SELL ORDER

An **on-stop sell order**, also known as a **stop loss order**, is an order that is specifically used in connection with a sell order where the limit price is below the existing market price. The order is triggered when the stock drops to the specified level. The purpose is to reduce the amount of loss that might be incurred or to protect at least part of a paper profit when a stock's price declines.

Note: On the Toronto Stock Exchange and TSX Venture Exchange all on-stop sell orders must be entered with a limit attached. Once an on-stop sell order is triggered, it enters as an order at its on-stop (limit) price.

EXAMPLE

On-Stop Sell Order:

"Sell 200 shares of ABC if the price drops to $24.50 or below."

Assume that ABC shares trade at $30 and your client has purchased the shares at this price. Your client decides that, should the price of ABC shares decline unexpectedly, he would prefer to limit his loss to $5.50 per share (ignoring commission). Therefore, your client places an on-stop sell order on 200 shares of ABC at $24.50.

If the price of ABC declines to the point that it trades at $24.50 or below, the order would be triggered. In a different scenario, if your client had paid $20 per share for ABC shares (prior to the stock's price advancing to $30), she could have put in an on-stop sell order at $24.50. This would allow her to protect at least part of her profit, on paper, should the stock's price decline unexpectedly before she could act.

ON-STOP BUY ORDER

An **on-stop buy order**, also known as a **stop buy order**, is the opposite of an on-stop sell order – that is, an order to buy a stock at or above a certain price. On-stop buy orders are used for two reasons:

- To protect a short position when the stock's price is rising.
- To ensure that a stock is purchased while its price is rising.

A short seller who protects the short position with an on-stop buy order is following the same logic as a person owning a stock who uses an on-stop sell order. In the second case, a client may wish to buy a stock only after it has demonstrated a certain upward price move, which is usually associated with a technical analysis buy signal.

Note: On the Toronto Stock Exchange and TSX Venture Exchange all on-stop buy orders must be entered with a limit attached. Once an on-stop buy order is triggered, it enters as an order at its on-stop (limit) price.

EXAMPLE

On-Stop Buy Order (Example 1):

ABC stock is currently trading at $30 per share. Your client decides that she would like to buy it, but only if it moves up to $35. By entering the order as an on-stop buy at $35, the order is not triggered until the stock trades at $35 or above.

On-Stop Buy Order (Example 2):

ABC stock is currently trading at $30 per share. Your client decides to short it at that price. However, he would like to limit his loss to $5 per share, so he enters an on-stop buy order at $35. The on-stop buy order is triggered only if the price of ABC stock trades at $35 or above. The on-stop buy order offers the client insurance in one respect. If the share price rises instead of falls, the client's position in ABC will be closed out, limiting the potential loss.

Professional (Pro) Order

A fundamental trading regulation to protect the public relates to the priority given to client orders. If the order of a client competes with a non-client order at the same price, the client's order is given priority of execution over the non-client order. A non-client order is an order for an account in which a partner, director, officer, advisor, or other employee of a dealer member holds a direct or indirect interest or an arbitrage order. This rule is applied within dealer members in its dealings with clients to ensure that a client's order has priority over a **professional (PRO) order**.

Tickets for orders for the accounts of partners, directors, officers, investment advisors, and specified employees (in some cases) must be clearly labelled PRO, N-C (non-client), or EMP (employee). Under the preferential trading rule, this type of order is executed after a client's order if both orders compete at the same price for the same security.

EXAMPLE

PRO Order:

An order is placed to sell 100 shares of ABC at $20. In this case, the account holder is an employee of the dealer member. Therefore, the order must be marked PRO (or EMP/N-C). If any client orders to sell ABC at $20 are outstanding, those orders will be filled before the employee's order.

Buy and Sell Orders

How do you determine the most appropriate type of order to place for a client, given the significant effect your decision can have on the share price? *Complete the online learning activity to assess your knowledge*.

KEY TERMS & DEFINITIONS

Can you read some definitions and identify the key terms from this chapter that match? *Complete the online learning activity to assess your knowledge.*

Summary

In this chapter, we discussed the following aspects of equity transactions:

- Unlike clients with cash accounts, clients with margin accounts can buy or sell securities on credit. Margin accounts can also hold long or short positions, whereas cash accounts can hold only long positions.
- A long margin position allows investors to partially finance the purchase of securities by borrowing money from the dealer. The margin is the amount put up by the client. The minimum margin required equals the initial cost of the transaction minus the loan. The investor earns a profit when the underlying stock price rises.
- A short margin position allows investors to sell securities they do not own. The short seller's dealer lends the securities to be shorted to the investor, and the investor sells the securities in the market, declaring the trade to be a short sale. The investor earns a profit when the initial sale price exceeds the subsequent repurchase cost, once the short position is closed out. Among other risks, *unlimited* loss is a risk for short sellers if the price of the security rises rather than falls.
- When a trade is completed on an exchange, the exchange's data transmission system reports the trade and provides the buying firm with trade details. Confirmation is sent to the buyer and seller. The buyer provides payment and the seller delivers the security by the settlement date. The mechanism and time frame for settlement depend on the type of securities traded.
- Buy and sell orders include the following types:
  - Market order (an order to buy or sell at the prevailing market price)
  - Limit order (an order to buy or sell at a specific price or better)
  - Day order (an order that expires if it is not executed on the day it is entered)
  - Good Til order (an order that is automatically cancelled on a date specified by the client or the market)
  - On-stop sell order (an order to sell a security when the price of a standard trading unit falls to a specified point)
  - On-stop buy order (an order to buy a security only after it has reached a specified price)
  - PRO order (an order for the accounts of partners, directors, officers, investment advisors, and specified employees)

Review Questions

Now that you have completed this chapter, you should be ready to answer the Chapter 9 Review Questions.

Frequently Asked Questions

If you have any questions about this chapter, you may find answers in the online Chapter 9 FAQs.

Derivatives

Chapter Overview

In this chapter, you will learn all about derivatives—what they are, what their underlying assets consist of, and who uses them. You will also learn about the different categories of derivatives, including options, forwards, and futures contracts. Finally, you will learn about the rights and warrants by which investors benefit from the underlying stock on which derivatives are based.

learning objectives	content areas
1 | Explain the differenc between over-the-counte and exchange-traded derivatives	**The Role of Derivatives**
2 | Identify the types of underlying assets on w derivatives are based	**Types of Underlying Assets**
3 | Describe how the various market participa use derivatives	**The Users of Derivatives**
4 | Describe call and pu option positions and the option strategies used by market participants.	**Options**
5 | Distinguish between forwards and futures contracts and the strategies used by market participants	**Forwards and Futures**
6 | Distinguish between features, benefits, and intrinsic value of rights and warrants.	**Rights and Warrants**

Key Terms

Key terms are defined in the Glossary and appear in **bold** text in the chapter.

American-style option

arbitrage

assigned

at-the-money

call option

Canadian Derivatives Clearing Corporation

cash-secured put write

commodities

commodity futures

covered call

cum rights

default risk

derivative

European-style option

ex-rights

exercise

exercise price

expiration date

financial asset

financial futures

forward

forward agreement

futures contract

good faith deposit

hedging

in-the-money

intrinsic value

Long-Term Equity Anticipation Security

marking to market

naked call

offering price

offsetting transaction

opening transaction

open interest

option

option premium

out-of-the-money

performance bond

put option

record date

rights

strike price

subscription price

sweetener

time value

trading unit

underlying asset

warrants

Introduction

In the past two decades, we have witnessed phenomenal growth in the creation and use of various derivative instruments. The source of this growth, to a large extent, has been due to the increase in the volatility of interest rates, exchange rates, and commodity prices. Financial deregulation, advances in information technology, and breakthroughs in financial engineering have also contributed to the growth. Depending on the position taken, derivatives can act as a substitute for the underlying asset, act as an offset to an existing position in the underlying asset, make it possible to enhance overall portfolio returns and to hedge or reduce exposure to different sources of risk.

Derivatives are not assets like stocks and bonds; their value is derived from an underlying asset, such as a financial security or a commodity. Institutional investors and portfolio managers rely on derivatives and consider them sensible investments that can enhance returns and protect against the inherent risk in the market. For many investors, however, particularly smaller retail investors, derivatives are considered risky, complex investments. This viewpoint can be attributed to the fact that derivatives are specialized financial instruments created by market participants.

Certainly, the frenzied trading that the financial press often reports about oil and gas futures, foreign currencies, pork bellies, and gold does sound exciting. We have all heard stories about a commodity trader somewhere in the world betting the right way on a position in natural gas, for example, and making a fortune.

Clearly, derivatives can be used in a variety of ways: as wildly speculative or rigorously conservative investment vehicles, and in strategies that fall between the two extremes.

This chapter focuses on the building blocks of derivatives. The key to understanding these products is to become comfortable with the terminology and to understand the contractual obligations being assumed and the types of strategy being pursued.

the Role of Derivatives

1 | Explain the differences between over-the-counter and exchange-traded derivatives.

A **derivative** is a financial contract between two parties whose value is derived from, or dependent on, the value of an **underlying asset**. The underlying asset can be a financial asset (such as a stock or bond), a currency, a **futures contract**, an index, or even an interest rate. It can also be a real asset or commodity, such as crude oil, gold, or wheat.

Because of the link between the value of a derivative and its underlying asset, derivatives can act as a substitute for, or as an offset to, a position held in the underlying asset. As such, derivatives are often used to manage the risk of an existing or anticipated position in the underlying asset. They are also used to speculate on the value of the underlying asset.

Some derivatives have more complex structures than others, but they all fall into one of two basic types: **options** and **forwards**. Both types are contracts between two parties: a buyer and a seller.

- The buyer in an option contract has the *right*, but not the obligation, to buy or sell a specified quantity of the underlying asset in the future at a price agreed upon today. The seller of the option is *obliged* to complete the transaction if called upon to do so.

  An option that gives its owner the right to buy the underlying asset is a **call option**; one that gives the right to sell the underlying asset is a **put option**.

- With forward contracts both parties *oblige* themselves to trade the underlying asset in the future at a price agreed upon today. Neither party has given the other any right; they are both obliged to participate in the future trade.

Despite this fundamental difference between options and forwards, the two types of derivatives have shared features.

Features Common to All Derivatives

All derivatives have the following features in common:

- They are contractual agreements between two parties (often called counterparties): a buyer and a seller. The agreements spell out the rights (if any) and the obligations of each party.
- They have a price upon which the buyer and seller must agree; buyers try to buy

them for as little as possible, whereas sellers try to sell them for as much as possible.

- They have an **expiration date**. Both parties must fulfill their obligations or **exercise** their rights under the contract on or before the expiration date. After that date, the contract is automatically terminated.

When a derivative contract is drawn up, it includes a price, or formula for determining the price, of an asset to be bought and sold in the future, either on or before the expiration date.

- With forwards, no up-front payment is required. Sometimes one or both parties make a **performance bond** or **good faith deposit**, which gives the party on the other side of the transaction a higher level of assurance that the terms of the forward will be honoured.
- With options, the buyer makes a payment to the seller when the contract is drawn up. This payment, known as a premium, gives the buyer the right to buy or sell the underlying asset at a preset price on or before the expiration date.

Another feature of derivatives is that, unlike financial assets such as stocks and bonds, they are considered a zero-sum game. Aside from commission fees and other transaction costs, the gain from an option or forward contract by one counterparty is exactly offset by the loss to the other counterparty. In other words, every dollar gained by one party represents a dollar lost by the counterparty.

Derivative Markets

As we discussed in previous chapters, most bonds trade in the over-the-counter (OTC) market, but stocks and derivatives trade both on the OTC market and in organized exchanges. The primary difference between exchange-traded and OTC stocks and bonds is trading mechanics, but the difference between exchange-traded and OTC derivatives is much more pronounced.

OVER-THE-COUNTER DERIVATIVES

The OTC derivatives market is an active and vibrant market that consists of a loosely connected and lightly regulated network of dealers who negotiate transactions directly with one another. Negotiations take place primarily over the telephone or through computer terminals. The OTC market is dominated by financial institutions, such as banks and investment dealers, that trade with their large corporate clients and other financial institutions. This market has no trading floor and no regular trading hours. Some traders and support staff work at their trading desks at night and during weekends and holidays.

One of the attractive features of OTC derivatives to the corporations and institutional investors that use them is that contracts can be custom designed to meet specific needs. As a result, OTC derivatives tend to be somewhat more complex than exchange-traded derivatives, because special features can be added to the basic properties of options and forwards.

EXCHANGE-TRADED DERIVATIVES

A derivative exchange is a legal corporate entity organized for the trading of derivative contracts. The exchange provides the facilities for trading: either a trading floor or an electronic trading system—in some cases, both. The exchange also stipulates the rules and regulations governing trading in order to maintain fairness, order, and transparency in the marketplace. Derivative exchanges evolved in response to OTC issues, including concerns around standardization, liquidity, and **default risk**.

Canada has one derivative exchange: The Montréal Exchange (or *Bourse de Montréal*) lists options on stocks, indexes, and U.S. currency, as well as exchange-traded forwards (futures) on bonds, bankers' acceptances, and indexes.

Exchange-Traded Versus Over-the-Counter Derivatives

You may wonder how organized exchanges and OTC markets successfully co-exist when the interests that underlie derivative instruments in both markets are basically the same. Over time, it seems logical that one of the two markets would prevail.

The co-existence has proven successful and long-lasting because the two markets differ in significant ways. Each market offers advantages depending on the particular needs of the users.

STANDARDIZATION AND FLEXIBILITY

One of the most important differences between exchange-traded and OTC derivatives is flexibility. In the OTC market, the terms and conditions of a contract can be tailored for specific users, who may choose the most appropriate terms to meet their particular needs. In contrast, for exchange-traded derivatives, the exchange specifies the contracts that are available to be traded; each contract has standardized terms and other specifications, which may or may not meet the needs of certain derivative users.

PRIVACY

Another important difference is the private nature of OTC derivatives. In an OTC derivative transaction, neither the general public nor others (including competitors) know about the transaction.

On exchanges, all transactions are recorded and known to the general public. However, the exchanges do not announce, nor do they necessarily know, the identities of the ultimate counterparties to every transaction.

LIQUIDITY AND OFFSETTING

Because they are private and custom designed, OTC derivatives cannot be easily terminated or transferred to other parties in a secondary market. In many cases, these contracts can only be terminated through negotiations between the two parties.

By contrast, the standardized and public nature of exchange-traded derivatives means that they can be terminated easily by taking an offsetting position in the contract.

Did You Know?

To offset a position means to close the position by taking the exact opposite position in the contract. For example, if you buy a call option on XYZ, you would offset the position by selling a call option on XYZ with exactly the same features.

DEFAULT RISK

Another downside to the private nature of OTC derivatives is that default risk (also called credit risk) is a major concern. Default risk is the risk that one of the parties to a derivative contract will not be able to meet its obligations to the other party. Given this risk, many derivative dealers in the OTC market do not deal with customers that are unable to establish certain levels of creditworthiness. In addition, the size of most contracts in the OTC market may be greater than most investors can manage. For this reason, the OTC market is restricted to large institutional and corporate customers. Individual investors are generally limited to dealing in exchange-traded derivatives.

Default risk is not a significant concern with exchange-traded derivatives. Clearinghouses, which are set up by exchanges to ensure that markets operate efficiently, guarantee the financial obligations of every party and contract. The clearing corporation becomes, in effect, the buyer for every seller and the seller for every buyer. The **Canadian Derivatives Clearing Corporation** (CDCC) is responsible for clearing Montréal Exchange futures and option trades.

REGULATION

Because exchange-traded contracts are public, whereas OTC contracts are private, derivative transactions on exchanges are extensively regulated by the exchanges themselves and by government agencies, whereas OTC derivative transactions are generally unregulated. On one hand, the regulated environment of exchange-traded derivatives brings about fairness, transparency, and an efficient secondary market. On the other hand, the largely unregulated environment in the OTC markets permits unrestricted and explosive growth in financial innovation and engineering.

Generally, no government approval is needed to offer new types of OTC derivatives; the innovative contracts are simply created by parties that see mutual gain in doing business with each other. The transactions are not bound by costly constraints or bureaucratic red tape.

Summary Comparison of Exchange-Traded and Over-the-Counter Derivatives

Table 10.1 summarizes the differences between exchange-traded and OTC derivatives.

Table 10.1 | Exchange-Traded and Over-the-Counter Derivatives

Exchange-Traded	**Over-the-Counter**
• Traded on an exchange	• Traded largely through computer and/or phone lines
• Standardized contract	• Terms of the contract agreed to between buyer and seller
• Transparent (public)	• Private
• Easy termination prior to contract expiry	• Early termination more difficult
• Clearinghouse acts as third-party guarantor ensuring contract’s performance to both trading parties	• No third-party guarantor
• Performance bond required, depending on the type of derivative	• Performance bond not required in most cases
• Gains and losses accrue on a day-to-day basis (marking to market)	• Gains and losses generally settled at the end of the contract, rather than marking to market
• Heavily regulated	• Much less regulated
• Delivery rarely takes place	• Delivery or final cash settlement usually occurring
• Commissions visible	• Fee usually built into price
• Used by retail investors, corporations and institutional investors	• Used by corporations and financial institutions

Types of Underlying Assets

2 | Identify the types of underlying assets on which derivatives are based.

The two general categories of underlying assets for derivative contracts are **commodities** and **financial assets**. The assets that underlie derivative contracts traded on organized exchanges in the United States and Canada are detailed below. In the OTC markets, the choice of underlying assets is limited only by the imagination and needs of market participants.

Commodities

Commodity futures and options are commonly used by producers, merchandisers, and processors of commodities to protect themselves against fluctuating commodity prices.

Speculators also use commodities to profit from the fluctuating prices. Depending on the commodity, prices are affected by supply and demand, agricultural production, weather, government policies, international trade, demographic trends, and economic and political conditions.

Commodities that underlie derivative contracts include the following types:

- Grains and oilseeds (e.g., wheat, corn, soybeans, and canola)
- Livestock and meat (e.g., pork bellies, hogs, live cattle, and feeder cattle)
- Forest, fibre, and food (e.g., lumber, cotton, orange juice, sugar, cocoa, and coffee)
- Precious and industrial metals (e.g., gold, silver, platinum, copper, and aluminum)
- Energy products (e.g., crude oil, heating oil, gasoline, natural gas, and propane)

Most of these commodities—such as soybeans, crude oil, and copper—are purchased to be consumed. Others—such as gold and silver—are used primarily for investment purposes.

Other than the energy category, most commodity derivatives are exchange-traded contracts.

Financial Assets

In recent decades, we have witnessed an explosive growth in derivatives, especially in financial derivatives. This growth has been fuelled by the following forces:

- Increasingly volatile interest rates, exchange rates, and equity prices
- Financial deregulation and intensified competition among financial institutions
- Globalization of trade and the tremendous advances in information technology
- Extraordinary theoretical breakthroughs in financial engineering

The most commonly used financial derivatives are summarized below.

EQUITiES

Equity is the underlying asset of a large category of financial derivatives. The predominant equity derivatives are equity options (options on individual stocks). These derivatives are traded mainly on organized exchanges such as the Montréal Exchange, the Chicago Board Options Exchange, the International Securities Exchange, the Boston Options Exchange, the NYSE AMEX Options, and the NYSE Arca Options markets.

INTEREST RATES

Exchange-traded interest rate derivatives are generally based on interest rate-sensitive securities rather than on interest rates directly. In Canada, underlying assets include bankers' acceptances and Government of Canada bonds. All interest rate futures trading in Canada takes place at the Montréal Exchange.

In the OTC market, interest rate derivatives are generally based on well-defined and well-known floating interest rates. Examples of such underlying rates include the yields on Treasury bills and Treasury bonds and the London Interbank Offer Rate, which is the interest earned on Eurodollar deposits in London. Because these OTC derivatives are based on an interest rate, rather than an actual security, the contracts are settled in cash.

CURRENCIES

The most commonly used underlying assets in currency derivatives are the U.S. dollar, British pound, Japanese yen, Swiss franc, and European euro. The types of contracts traded include currency futures and options on organized exchanges, and currency forwards and currency swaps in the OTC market.

Did You Know?

A swap is a private, contractual agreement between two parties used to exchange (swap) periodic payments in the future based on an agreed to formula. Swaps are essentially equivalent to a series of forward contracts packaged together. The concept of swaps is explained more fully in the *Derivatives Fundamentals Course* (DFC).

the Users of Derivatives

3 | Describe how the various market participants use derivatives.

Derivative users can be divided into four groups:

- Individual investors
- Institutional investors
- Businesses and corporations
- Derivative dealers

The first three groups are the end users of derivatives. They use derivatives either to speculate on the price or value of an underlying asset, or to protect the value of an anticipated or existing position in the underlying asset. The latter application, a form of risk management, is known as **hedging**.

The last group, derivative dealers, are the intermediaries in the markets who buy and sell to meet the demands of the end users. Derivative dealers do not normally take large positions in derivative contracts. Rather, they try to balance their risks and earn profits from the volume of deals that they arrange with their customers.

Individual Investors

For the most part, individual investors are able to trade exchange-traded derivatives only. They are active investors in exchange-traded options markets and, to a lesser extent, futures markets.

Individual investors should use derivatives only if they fully understand all of the risks and potential rewards. They should also consider speculative strategies only if they have a high degree of risk tolerance and risk capacity, because of the potential to suffer large losses in derivative trading. Risk management strategies, on the other hand, can be beneficial to all investors, from the most conservative to the most aggressive.

Individual investors in Canada can trade exchange-traded derivatives directly by opening a special type of account with a full-service or self-directed brokerage firm registered to offer such accounts. To deal with investors in exchange-traded derivatives, investment advisors at full-service firms and investment representatives at self-directed firms must be properly licensed.

Institutional Investors

Institutional investors that use derivatives include mutual fund managers, hedge fund managers, pension fund managers, and insurance companies, among others. Like individual investors, institutional investors use derivatives for both speculation and risk management. In contrast to individuals, most institutional investors are able to trade OTC derivatives in addition to exchange-traded derivatives.

From a risk management perspective, hedging is the attempt to eliminate or reduce the risk of either holding an asset for future sale or anticipating a future purchase of an asset. Hedging with derivatives involves taking a position in a derivative with a payoff that is *opposite* to that of the asset to be hedged. For example, if a hedger owns an asset, and is concerned that the price of the asset could fall in the future, a short derivative position in the asset would be appropriate. A decline in the price of the asset will result in a loss on the asset being held, but would be offset by a profit on the derivative contract.

In general, speculation is *inconsistent* with the objective of risk management because it increases risk, instead of reducing it. Specifically, speculation involves a future focus, the formulation of expectations, and the willingness to take positions in order to profit. In other words, speculators bet on the direction of the market and take positions accordingly to profit from a certain predicted movement of the market.

Other common investment strategies using derivatives include market entry and exit, arbitrage, and yield enhancement, as explained below:

Market entry and exit

Quickly exiting or entering a market in the conventional way, by buying and selling the actual stocks, can be inefficient and more costly than expected. The costs associated with trading include commission fees, bid-ask spreads, and other administrative fees. These costs can be high in some cases, and may affect the decision to enter or exit a market.

In addition, buying or selling a large quantity of certain securities can produce adverse price pressures on the market. A large sell order may push the price down, whereas a large buy order may bid up the price. These adverse price effects, which are a hidden cost to the transaction, can be especially severe in thinly traded equity or bond markets (that is, markets for illiquid securities).

It is usually more efficient and cost-effective to carry out temporary change to the portfolio using derivatives, rather than trading in the underlying assets directly.

For example, the manager of a global equity fund may want to temporarily change the composition of her portfolio by moving out of British stocks and into French and German stocks for only a few months. To do so, she could sell British index contracts and buy French and German index contracts. When market conditions subsequently change, a reverse of those contracts would bring the portfolio back to its original composition.

Arbitrage

An arbitrage opportunity refers to a scenario where the same asset or commodity is traded at different prices in two separate markets. By purchasing low in one market and selling high in the other market simultaneously, an investor locks in a fixed amount of profit at no risk.

For example, suppose an arbitrageur spots an exploitable market mispricing and attempts to profit by buying in the cheap market and selling in the rich market. If the two transactions are executed simultaneously, or nearly simultaneously, then there is no investment or risk involved in the arbitrage.

Yield enhancement

Yield enhancement is a method of boosting returns on an underlying investment portfolio by taking a speculative position based on expectations of future market movements. The most popular way to enhance an investment’s yield is by selling options against the position.

Corporations and Businesses

Corporations of all types and sizes use derivatives. For the most part, however, users tend to be larger companies that make use of borrowed money, have multinational operations that generate or require foreign currency, or produce or consume significant amounts of one or more commodities.

Corporations and businesses use derivatives primarily for hedging purposes. In particular, they tend to focus on derivatives that help them hedge interest rate, currency, and commodity price risk. Corporations that hedge with derivatives do so because, rather than focusing on these risks, they prefer to direct their efforts toward running their primary business.

On the other hand, a company that anticipates buying an asset in the future may be concerned that the price could rise before the purchase is made. Hedging risk by buying a forward contract or a call option is appropriate in this case. A price increase will result in the hedger paying a higher price, but this cost will be offset by a profit on the forward or call option.

A hedger starts with a pre-existing risk that is generated from a normal course of business. For example, a farmer growing wheat has a pre-existing risk that the price of wheat will decline by the time it is harvested and ready to be sold. In the same way, an oil refiner that holds storage tanks of crude oil waiting to be refined has a pre-existing risk that the price of the refined product may decline in the interim.

To reduce or eliminate these price risks, the farmer and the refiner could take short derivative positions that will profit if the price of their assets declines. Any losses in the underlying assets will be offset by gains in the derivative instruments. That being said, any gains in these assets would be offset by derivative losses of roughly the same size, depending on the type of derivative chosen and the overall effectiveness of the hedge.

Derivative strategies were once little used and poorly understood by corporations, but they have increasingly become an important corporate-level concern. It is now expected that a company's board of directors will use derivatives in an appropriate fashion as a risk management tool. Although it may seem like a simple decision, determining whether or not to hedge and how to hedge can be a complex process. Hedging is not always the right choice, nor does it always result in the complete elimination of all risks.

Derivative Dealers

Dealers in the exchange-traded market take the form of market makers that stand ready to buy or sell contracts at any time. Exchange-traded market makers include banks, investment dealers, and professional individuals.

Derivative dealers play a crucial role in the OTC markets by taking the other side of the positions entered into by end users. In Canada, the primary OTC derivative dealers are the chartered banks and their investment dealer subsidiaries, as well as the Canadian subsidiaries of large foreign banks and investment dealers.

Options

4 | Describe call and put option positions and the option strategies used by market participants.

An option is a contract between two parties: a buyer (known as the *long position* or holder) and a seller (known as the *short position* or the writer). This contract gives certain rights or obligations to buy or sell a specified amount of an underlying asset, at a specified price, within a specified time. The buyer of the option has the right, but not the obligation, to exercise the terms of the contract, whereas the seller is obliged to fulfill his or her part of the contract if called upon to do so.

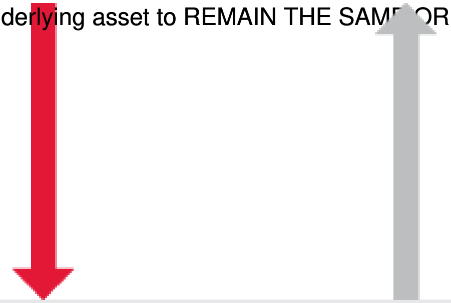
An option that gives its holder the right to *buy*, and the seller the obligation to *sell*, the underlying asset is known as a *call option*. An option that gives its holder the right to *sell*, and its writer the obligation to *buy*, the underlying asset is referred to as a *put option*.

Table 10.2 describes the four basic option positions and illustrates in each position whether the investor expects the price of the underlying asset to rise or fall.

Table 10.2 | The Four Basic Option Positions

	Call Option	**Put Option**
Holder (Long Position)	• PAYS premium to the writer • Has the RIGHT to BUY the underlying asset at the predetermined price • Expects the price of the underlying asset to RISE ↑	• PAYS premium to the writer • Has the RIGHT to SELL the underlying asset at the predetermined price • Expects the price of the underlying asset to FALL ↓
Writer (Short Position)	• RECEIVES premium from the buyer • Has the OBLIGATION to SELL the underlying asset at the predetermined price, if called upon to do so	• RECEIVES premium from the buyer • Has the OBLIGATION to BUY the underlying asset at the predetermined price, if called upon to do so

- Expects the price of the underlying asset to REMAIN THE SAME OR RISE



When traders and investors discuss options, they usually describe the specific option they are talking about by quickly summarizing the option's most salient features in one phrase. They generally use the following syntax:

> {Number of Option Contracts} + {Underlying Asset} + {Expiration Month} + {Strike Price} + {Option Type}

EXAMPLE

An investor wants to buy 10 exchange-traded call options on XYZ stock with an expiration date in December and a strike price of $50. The investor states, "I want to buy 10 XYZ December 50 calls."

Just as he would if he were buying a stock, the investor also indicates the price he is willing to pay. He can buy the options *at market*, in which case he agrees to accept the best price currently available, or he can enter a limit order by specifying the highest price he is willing to pay.

Options Terminology

The following different terms include common phrases used when discussing options:

Strike price	The **strike price** (or **exercise price**) is the price at which the underlying asset can be purchased or sold in the future. The buyer and the seller agree on this future price when they enter into the option contract.
Option premium	To obtain the right to buy or sell the underlying asset, option buyers must pay the sellers a fee, known as the option price or **option premium**. Once the premium has been paid, the option buyer has no further obligation to the writer, unless the buyer decides to exercise the option. Therefore, the most that the buyer of an option can lose is the premium paid. On the other hand, writers of options must always stand ready to fulfill their obligation to buy or sell the underlying asset.
Expiration date	Exchange-traded options expire at specific and pre-established dates. For example, the expiration months for a series of options on ABC stock may be January, April, July, and October. This means that there are four different sets of options for ABC stock, each of which expires in a different month. Typically, the day that the option expires is the third Friday of the expiration month. Traditionally, options are listed with relatively short terms of nine months or less to expiration. Exchanges have also introduced weekly options for some indexes and equities. Weekly options are listed for trading at the open on Thursdays, with expiration dates on any of the five Fridays following the listing week. Weekly options provide investors with more targeted trading opportunities, such as taking advantage of earning releases, government reports, and central banks' interest rates policy announcements.

Trading unit

An option's **trading unit** describes the size or amount of the underlying asset represented by one option contract. For example, exchange-traded stock options in North America have a standard trading unit of 100 shares. Therefore, the holder of one call option has the right to buy 100 shares of the underlying stock, while the holder of one put option has the right to sell 100 shares. Options on other underlying assets have a variety of trading units.

The premium of an option is always quoted on a per unit basis, which means that the premium quote for a stock option is the premium for each share of the underlying stock. To calculate the total premium for a contract, multiply the premium quote by the option's trading unit. For example, if a stock option is quoted with a premium of $1, it will cost the buyer $100 for each contract.

American-style options can be exercised at any time, up to and including the expiration date. All exchange-traded stock options in North America are American-style options.

European-style options can be exercised only on the expiration date. Most index options are European-style options.

Long-Term Equity Anticipation Securities

A **Long-Term Equity Anticipation Security** is simply a long-term option contract offering the same risks and rewards as a regular option.

Opening transaction

An **opening transaction** occurs when an investor establishes a new position in an option contract. An opening buy transaction results in a long position in the option, whereas an opening sell transaction results in a short position in the option. On or before an option's expiration date, one of three things will happen to all long and short option positions:

- *The position will be offset.*

  Positions may be liquidated prior to expiration by way of an **offsetting transaction**, which, in effect, cancels the position. Offsetting a long position involves *selling* the same type and number of contracts; offsetting a short position involves *buying* the same type and number of contracts. Unless they are specifically designed to be transferable, OTC options can only be offset through negotiations between the long and short parties. Exchange-traded options, however, can be offset simply by entering an offsetting order on the exchange on which the option trades.
- *The party holding the long position will exercise the option.*

  When this happens, the party holding the short position is said to be **assigned** on the option. For the owners of call options, the act of exercising involves buying the underlying asset from the assigned call writer at a price equal to the strike price. For the owners of put options, the act of exercising involves selling the underlying asset to the assigned put writer at a price equal to the strike price.
- *The party holding the long position will let the option expire worthless.*

  Buyers of options have rights, not obligations. They do not have to exercise an option before it expires if it is not in their best interest to do so; they can allow it to expire instead. In such cases, the option buyer loses money with the premium paid, and the option writer makes money with the premium received.

In-the-money

Owners of options will exercise only if it is in their best financial interest, which can only occur when an option is **in-the-money**.

- A call option is in-the-money when the price of the underlying asset is higher than the strike price. If this is the case, the call option holder can exercise the right to buy the underlying asset at the strike price and then turn around and sell it at the higher market price.
- A put option is in-the-money when the price of the underlying asset is lower than the strike price. If this is the case, the put option holder can exercise the right to sell the underlying asset at the higher strike price, which would create a

short position, and then cover the short position at the lower market price.

Out-of-the-money and At-the-money

Owners of the options will definitely not exercise if they are **out-of-the-money** or **at-the-money**.

- A call option is out-of-the-money when the price of the underlying asset is lower than the strike price.
- A put option is out-of-the-money when the price of the underlying asset is higher than the strike price.
- Call and put options are at-the-money when the price of the underlying asset equals the strike price.

In either case, it is not in the financial best interest of an option holder to exercise. If a call option is out-of-the-money, it does not make financial sense for the call option holder to buy the underlying asset at the strike price (by exercising the call) when it can be purchased at a lower price in the market. Similarly, if a put option is out-of-the-money, it does not make financial sense for the put option holder to sell the underlying asset at the strike price (by exercising the put) when it can be sold at a higher price in the market.

Because there is generally no advantage to exercising an at-the-money option (for which the strike price equals the market price of the underlying asset), at-the-money options are normally left to expire worthless.

Intrinsic value is the value of certainty. The in-the-money portion of a call or put option is referred to as the option's intrinsic value.

Intrinsic value is calculated using the following formulas:

Intrinsic Value of an In-the-Money Call Option = Price of Underlying – Strike Price

Intrinsic Value of an In-the-Money Put Option = Strike Price – Price of Underlying

For example, if XYZ stock is trading at \$60, a call option on XYZ stock with a strike price of \$55 has \$5 of intrinsic value (calculated as \$60 – \$55 = \$5). Similarly, a put option on XYZ with a strike price of \$65 has \$5 of intrinsic value (calculated as \$65 – \$60 = \$5).

If an option is *not* in-the-money, it has zero intrinsic value. For example, a call option on XYZ with a \$65 strike price has no intrinsic value when XYZ is trading at \$60, as does a put option with a strike price of \$55.

Intrinsic value is a relatively easy concept to understand: it is the amount that the owner of an in-the-money option would earn by immediately exercising the option and offsetting any resulting position in the underlying asset.

Time value is a more subtle concept than intrinsic value. Simply put, time value represents the value of uncertainty. Option buyers want options to be in the-money at expiration; option writers want the reverse. The greater the uncertainty about where the option will be at expiration—either in-the-money or out-of-the-money—the greater the option's time value.

Prior to the expiration date, most options trade for more than their intrinsic value. The option's time value is the amount that an option is trading above its intrinsic value. It is calculated using the following formula:

Option Price – Option's Intrinsic Value = Time Value of an Option

For example, if a call option on XYZ with a strike price of \$55 is trading for \$6 when XYZ stock is trading at \$60, the option has \$1 of time value, calculated as follows:

\$6 – (\$60 – \$55) = \$1

You can re-arrange the equation for the time value of an option to find that the price of any option is simply the sum of its intrinsic value and its time value:

Option Price = Intrinsic Value + Time Value

Option Exchanges

In Canada, the Montréal Exchange lists options on individual stocks, stock indexes, financial futures, exchange traded funds (ETFs), and the U.S. dollar.

Just like stocks, exchange-traded option prices and trading information are reported on the exchanges' websites, by financial data providers, and in the business press the next day. Table 10.3 provides an illustration.

Table 10.3 | Equity Option Quotation

XYZ Inc.	[illegible]
Mar.	[illegible]
	[illegible]
Sept.	[illegible]
	[illegible]
Dec.	[illegible]
Total	[illegible]

Explanation

XYZ Inc. This is the *underlying* for the option.

17.75 This number represents the *last sale price* of the underlying.

Mar. This is the options' *expiration month* (March, September, December).

$17.50 This number represents the *strike or exercise price* of each series.

$17.50P The P indicates that the option is a *put*.

3.80 This number represents the latest *bid price* for each XYZ option, expressed as a per share price.

4.05 This number represents the latest *asked price* for each XYZ option, expressed as a per share price.

3.95 This number represents the last *sale price* (last premium traded) of an option contract, expressed as a per share price. For example, the 3.95 figure for the XYZ March 17.50 calls is the last sale price for this series.

Opt Vol This is the number of options traded (50 + 5 + 41 + 30 + 193 = 319). For example, 50 XYZ March 17.50 calls were traded in the trading session shown, representing 5,000 underlying XYZ (calculated as 50 × 100).

Opt Int This is the **open interest**—that is, the total number of option contracts in the series that are currently outstanding and have not been closed out or exercised. For example, the figure 1595 refers to the open interest for the XYZ March 17.50 calls. The figure 10,404 refers to the open interest of all series of XYZ options, including the series that did trade as well as the series that did not trade.

Option Strategies for Individual and Institutional Investors

The range and complexity of options trading strategies are practically limitless. However, we will examine eight option strategies commonly used by individual and institutional investors. Each strategy is either a speculative or risk management strategy, and each is based on exchange-traded options on the shares of the fictitious company XYZ Inc. *Note:* These strategies, and the majority of the results, are equally applicable to options on any underlying asset.

Dive Deeper

If you want to learn more about options, the *Derivatives Fundamentals and Options Licensing Course* (DFOL) offered by CSI explains the strategies commonly used in the market to speculate or to hedge portfolios.

For all of the strategies presented below, assume that we are currently in the month of June and that XYZ Inc. stock is trading at $52.50 per share. The discussions that follow make use of one of the four options listed in Table 10.4.

Table 10.4 | Four Options on XYZ Inc. Stock Trading at $52.50

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	September	[illegible]	[illegible]
[illegible]	December	[illegible]	[illegible]
[illegible]	September	[illegible]	[illegible]
[illegible]	December	[illegible]	[illegible]

Note: To keep things simple, commissions, margin requirements, and dividends are ignored in all of the examples in this chapter.

BUYING CALL OPTIONS

Investors buy call options with either of two investment strategies in mind: to speculate in the hope of earning a profit or to manage risk.

The most popular reason for buying calls is to profit from an expected increase in the price of the underlying stock. The buyer profits by investing only a fraction of the amount required to buy the stock. This speculative strategy relies on the fact that call option prices tend to rise as the price of the stock rises. The challenge with this strategy is to select the appropriate expiration date and strike price to generate the maximum profit, given the expected increase in the price of the stock.

There are two ways that investors can realize profit on call options when the underlying increases in price: they can exercise the option and buy the stock at the lower exercise price, or they can sell the option directly into the market at a profit.

Calls are also bought to establish a maximum purchase price for the stock, or to limit the potential losses on a short position in the stock. In this sense, options act much like insurance by protecting the buyer when the stock price moves higher. These strategies are considered risk management strategies.

The examples that follow illustrate the two types of call option strategies.

EXAMPLE

Refer to Table 10.4 for figures presented in the following strategy.

STRATEGY: BUYING CALLS TO SPECULATE

Assume that an investor buys five XYZ December 55 call options at the current price of $2.

We break down this purchase to its individual parts as follows:

The number of contracts (each contract worth 100 shares) = five
The underlying stock on which the call option is based = XYZ
The expiration month = December
The strike price = 55
The premium or cost to purchase the call option = $2

In this example, the holder (i.e., the investor) pays a premium of $1,000 (calculated as $2 × 100 shares × 5 contracts) to obtain the right to buy 500 shares of XYZ Inc.

at $55 per share on or before the December expiration. Because the options are out-of-the-money (i.e., the strike price is greater than the stock price of $52.50), the $2 premium consists entirely of time value. The options have no intrinsic value.

If the holder is a speculator, the intent of his call purchase is to profit from the expectation of a higher XYZ stock price. He probably has no intention of actually owning 500 shares of XYZ. Rather, he will want to sell the five XYZ December 55 calls before they expire, preferably at a higher price than what he paid for them.

His chance of success depends on many factors, most importantly the price of XYZ shares. If the price of XYZ shares rise, the price of the calls will likely rise, and the holder will be able to sell them at a profit. Of course, he faces the risk that the stock price will not rise or, worse, will fall. If the price does fall, the price of the calls will likely fall as well. In that case, he may be forced to sell them at a loss.

For example, if by September the price of XYZ stock is $60, the XYZ December 55 calls will be trading for at least their intrinsic value, which in this case is $5. Because there are still three months remaining before the options expire, the premium will also include some time value. Assuming that the calls have $1.70 of time value, they will be trading at $6.70. Therefore, the holder could choose to sell the options at $6.70 and realize a profit of $4.70 per share, equal to the difference between the current premium ($6.70) minus the premium paid ($2), or $2,350 in total (calculated as $4.70 × 100 shares × 5 contracts).

If, however, XYZ shares are trading at $45 per share in September, the XYZ December 55 calls might be worth only $0.25 (the time value of $0.25 is an assumption made as part of the example). At this time, and indeed, at all other times before expiration, the holder will have to decide whether to sell the options or hold them in the hope that the stock price (and the options' price) recovers. If he decides to sell at this time, he will incur a loss equal to $1.75 per share (calculated as $2 – $0.25) or $875 in total (calculated as $1.75 × 100 shares × 5 contracts).

The decision to sell prior to the expiration of a call option is not easy. On one hand, selling before expiration allows the holder to earn any time value that remains built into the option premium. On the other hand, the option holder gives up the chance of reaping any further increases in the option's intrinsic value. The call holder's outlook for the price of the stock obviously plays a crucial role in the decision.

An attractive feature of a speculative call option strategy is the potential to achieve larger profits, on a percentage basis, through leverage. Conversely, of course, by buying call options instead of buying the stock directly, the investor is also at risk of greater losses.

EXAMPLE

Refer to Table 10.4 for figures presented in the following strategy.

Strategy: Buying Calls to Speculate (*Continued*)

Assume that the price of XYZ Inc. stock rises to $60 in September. If the call holder sells the XYZ December 55 calls for a profit of $4.70, the rate of return on the investment, based on the initial cost of $2, is 235%, calculated as follows:

$$\frac{\$4.70}{\$2} \times 100 = 235\%$$

If the stock price declines to $45, however, and the call buyer sells the options for a loss of $1.75, and the rate of return is –87.5%, calculated as follows:

$$\frac{-\$1.75}{\$2} \times 100 = -87.5\%$$

To see how leverage increases both profits and losses on a percentage basis, compare these returns to the returns from simply buying the stock at $52.50. If the stock is sold at $60, for a profit of $7.50 per share, the return is 14.3%, calculated as follows:

$$\frac{\$7.50}{\$52.50} \times 100 = 14.3\%$$

If the stock falls to $45, and the loss is $7.50 per share, the rate of return is –14.3%, calculated as follows:

$$\frac{-\$7.50}{\$52.50} \times 100 = -14.3\%$$

From this example we can see that the call provided a greater rate of return when the stock price increased but a lower rate of return when the stock price fell. This potential loss is the risk faced by all investors who use leverage when they buy call options.

The other reason that investors buy call options is to manage risk.

EXAMPLE

Refer to Table 10.4 for figures presented in the following strategy.

Strategy: Buying Calls to Manage Risk

Assume that a fund manager intends to buy 50,000 shares of XYZ stock, but will not receive the funds until December. Buying 500 XYZ December 55 call options will protect the fund manager from any sharp increase in the price of XYZ above the $55 strike price by establishing a maximum price at which the shares can be purchased.

For example, if XYZ shares increase to $60 just prior to the expiration date in December, the options will trade for their intrinsic value only, in this case $5 (calculated as $60 – $55).

Because the call buyer now has the money to buy the shares, she can exercise the calls, at which point she will purchase 50,000 shares of XYZ at the strike price of $55.

Because the options originally cost $2, the call buyer's net purchase price is actually $57 per share. If, however, XYZ shares are trading at $45 just prior to the expiration date, she will let the options expire and will buy the shares at the going price of $45 each. Her effective cost is $47, which includes the $2 paid for the calls.

Call options can also be used to manage risk by protecting a short sale.

Let's assume that the investor sells short 500 shares of XYZ stock at its current price of $52.50, but wants to limit the loss in case the stock price rises. By buying 5 XYZ December 55 call options, she protects her investment from any sharp increase in the price of XYZ above the $55 strike price because the call establishes a maximum price at which the shares can be purchased back.

For example, if XYZ shares increase to $60 just prior to the expiration date in December, the options will be trading for their intrinsic value only, which in this case is $5 (calculated as $60 – $55). The investor exercises the calls and purchases 500 shares of XYZ at the strike price of $55. Because the options originally cost $2, her net purchase price is actually $57 per share. And because she sold the stock short at $52.50 and bought it back at $57, her loss is limited to $4.50 per share.

If, however, XYZ shares are trading at $45 just prior to the expiration date, the investor will let the options expire and will buy the shares at the market price of $45 per share. Her effective purchase price is $47, which includes the $2 paid for the calls. In this case, her profit is $5.50 on the short sale (i.e., sell at $52.50, buy back at $47 to close the position).

WRITING CALL OPTIONS

Investors write call options primarily for the income they provide in the form of the premium. The income is the writer's to keep no matter what happens to the price of the underlying asset or what the buyer eventually does. Call writing strategies are primarily speculative in nature, but they can be used to manage risk as well.

Call option writers can be classified as either **covered call** writers or as **naked call** writers:

- Covered call writers own the underlying stock, and use this position to meet their obligations, if they are assigned.
- Naked call writers do not own the underlying stock. If a naked call writer is assigned, the underlying stock must first be purchased in the market before it can be sold to the call option buyer. Because call option buyers will only exercise if the price of the stock is above the strike price, assigned naked call writers must buy the stock at one price (the market price) and sell at a lower price (the strike price). However, naked call writers hope that this loss is less than the premium they originally received, so that the overall result for the strategy is a profit. The maximum loss that a naked call writer can face is theoretically unlimited, because there is no limit to how high the price of the underlying stock can rise.

EXAMPLE

Refer to Table 10.4 for figures presented in the following strategy.

Strategy: Covered Call Writing

Assume that an investor purchases 1,000 shares of XYZ at $40 per share. She writes 10 XYZ September 50 call options at the current price of $4.55. She receives a premium of $4,550 (calculated as $4.55 × 100 shares × 10 contracts) to take on the obligation of selling 1,000 shares of XYZ Inc. at $50 per share on or before the expiration date in September. Because the options are in-the-money (i.e., the strike price is less than the stock price), the $4.55 premium consists of both intrinsic value and time value. Intrinsic value is equal to $2.50, and time value is equal to $2.05.

Because the investor owns shares of XYZ, the overall position is known as a covered call, and the investor is the covered call writer.

If, at expiration in September, the options are in-the-money (i.e., the price of XYZ stock is greater than $50), the covered call writer will be assigned and will have to sell the stock to the call buyer at $50 per share.

From the covered call writer's perspective, however, the effective sale price is $54.55 because of the initial premium of $4.55. Overall, the total profit on this position is $14.55 per share because the investor bought XYZ at $40, sold it for $50, and made $4.55 from the premium.

If, however, the price of the stock at expiration in September is less than $50, the covered call writer will not be assigned, and the options will expire worthless. Call buyers will not elect to buy the stock at $50 when it can be purchased for less in the market. The covered call writer will retain the shares and the initial premium.

In this case, the premium reduces the covered call writer's effective stock purchase price by $4.55 per share. Because the covered call writer bought the XYZ stock at $40, and the options expired worthless, the covered call writer's effective purchase price is now $35.45 (calculated as $40.00 – $4.55). Therefore, writing the call slightly reduces the risk of owning the stock.

Strategy: Naked Call Writing

Assume that a different investor writes 10 XYZ September 50 call options at the current price of $4.55. This investor does not already own the shares, so he is considered a naked call writer. The naked call writer's hope is that the price of XYZ stock will be lower than $50 at expiration. If this happens, the calls will expire worthless, and the naked call writer will earn a profit equal to $4.55 per share (i.e., the initial premium received). This premium is the most that the call writer can expect to earn from this strategy.

If the price of the shares increases, the naked call writer will realize a loss if the stock price is higher than the strike price *plus* the premium received, in this case $54.55. If this happens, the naked call writer will be forced to buy the stock at the higher market price and then turn around and sell the shares to the call buyer at the $50 strike price. When the stock price is greater than $54.55, the cost of buying the stock is greater than the combined proceeds from selling the stock and the premium initially received.

For example, if the price of the XYZ rises to $60 at expiration, the naked call writer will suffer a $10 loss on the purchase and sale of the shares (i.e., buy at $60, sell at $50). This loss is offset somewhat by the initial premium received of $4.55, so that the actual loss is $5.45 per share, or $5,450 in total (calculated as $5.45 × 100 shares × 10 contracts).

BUYING PUT OPTIONS

A popular reason for buying put options is to profit from an expected decline in the price of the stock. This speculative strategy relies on the fact that put option prices tend to rise as the price of the stock falls. Just like buying calls, the selection of an expiration date and strike price is crucial to the success (or lack thereof) of the strategy.

Puts are also bought for risk management purposes because they can be used to lock in a minimum selling price for a stock. They are popular with investors who own stock because they can protect the investors from a decline in the price of a stock below the strike price.

EXAMPLE

Refer to Table 10.4 for figures presented in the following strategy.

Strategy: Buying Puts to Speculate

Assume that an investor buys 10 XYZ September 50 put options at the current price of $1.50. The put buyer (the investor) pays a premium of $1,500 (calculated as $1.50 × 100 shares × 10 contracts) to obtain the right to *sell* 1,000 shares of XYZ Inc. at $50 per share on or before the expiration date in September. Because the options are out-of-the-money (i.e., the strike price is less than the stock price), the $1.50 premium consists entirely of time value. The option has no intrinsic value.

The put buyer could have an opinion about the price of XYZ stock exactly *opposite* that of the call buyer. That is, the put buyer might believe that the price of XYZ stock will fall, and that put options on XYZ can be bought and sold for a profit. The put buyer might have no intention of actually selling 1,000 shares of XYZ stock. In fact, in this case, he probably doesn't even own 1,000 XYZ shares to sell. He only wants to speculate that the price of XYZ shares will fall.

If the stock price falls, the XYZ September 50 put options will likely rise in value, which will allow the put buyer to sell his options for a profit. Of course, if the stock price rises, the put options will most likely lose value, and the put buyer may be forced to sell the options at a loss.

For example, if XYZ stock is trading at $45 one month before the September expiration date, the XYZ September 50 puts will be trading for at least their intrinsic value, or $5. Because there is still one month before the expiration date, the options will have some time value as well.

Assuming that they have time value of $0.25, the options will trade at $5.25. Therefore, the put buyer could choose to sell the puts for $5.25 and realize a profit of $3.75 per share, which is equal to the difference between the current put price and the put buyer's original purchase price of $1.50.

Based on 10 contracts, the put buyer's total profit is $3,750 (calculated as $3.75 × 100 shares × 10 contracts).

If, however, XYZ were trading at $60 per share, the XYZ September 50 puts might be worth only $0.05. Because the options are so far out-of-the-money, and because there is only one month left until the options expire, the options will not have a lot of time value. The low option price implies that the market does not expect XYZ shares to fall below $50 anytime over the next month.

The put buyer would have to decide whether to sell the options at this price, or hold them in hope that the price of XYZ does fall to below $50. If the stock does fall, the price of puts will rise. If the stock doesn't fall below $50, the puts will be worthless when they expire. If the put buyer decides to sell the options at $0.05, he will incur a loss equal to $1.45 per share ($0.05 – $1.50) or $1,450 in total (calculated as $1.45 × 100 shares × 10 contracts).

Strategy: Buying Puts to Manage Risk

Assume that a different investor buys 10 XYZ September 50 put options at the current price of $1.50, but in this case the put buyer actually owns 1,000 shares of XYZ. In this case, the put purchase will act as *insurance* against a drop in the price of the stock. Recall that put buyers have the right to sell the stock at the strike price. Therefore, buying a put in conjunction with owning the stock (a strategy known as a *married put* or a *put hedge*), gives the put buyer the right to sell the stock at the strike price. If the price of the stock is below the strike price of the put when the puts expire, the put buyer will most likely exercise the puts and sell the stock to the put writer. The strike price acts as a floor price for the sale of the stock.

For example, if XYZ shares are trading at $45 just prior to the expiration date in

September, the puts will trade very close to their intrinsic value of $5. (They are in-the-money, and there is very little time left until the expiration date.)

The put buyer may choose to exercise the puts and sell the stock at the $50 strike price. She has been protected from the drop in the stock price below $50, but the protection was not free: she had to pay $1.50 for the puts.

The put buyer's effective sale price is actually only $48.50 (calculated as $50 – $1.50), after deducting the cost of the puts. However, this sale price is still better than the stock's $45 market price.

WRITING PUT OPTIONS

Investors write put options primarily for the income they provide in the form of the premium. The income is the writer's to keep, no matter what happens to the price of the underlying asset or what the put buyer eventually does. Like their call-writing cousins, put-writing strategies are primarily speculative in nature, but they can be used to manage risk as well.

Put option writers can be classified as either *covered* or *naked*. Covered put writing, however, is not nearly as common as covered call writing because, technically, a covered put write combines a short put with a *short* position in the stock. It's a simple fact of the stock markets that there are many more long positions in stocks than there are short positions.

Another put writing strategy, similar to covered put writing, is the **cash-secured put write**. A cash-secured put write involves writing a put and setting aside an amount of cash equal to the strike price. If possible, the cash should be invested in a short-term, liquid money market security such as a Treasury bill so that it will earn some interest. If the cash-secured put writer is assigned, the cash (or the proceeds from selling the Treasury bill) will be used to buy the stock from the exercising put buyer.

Naked put writers have no position in the stock and have not specifically earmarked an amount of cash to buy the stock. However, naked put writers must be prepared to buy the stock, so they should always have the financial resources to do so.

Naked put writers hope to profit from a stock price that stays the same or goes up. If this happens, the price of the puts will likely decline as well, and the chance of being assigned will also be less. The naked put writer may then choose to buy back the options at the lower price to realize a profit. If the stock price does not rise, the put writer may be assigned and may suffer a loss. Depending on how low the stock price is and the amount of premium received, naked put writers may still profit even if they are assigned. The maximum loss that the naked put writer may face is limited because the price of the underlying stock can fall to a price no lower than $0. The loss would be offset somewhat by the premium received for writing the call. Although this situation is favourable compared to the unlimited risk faced by the naked call writer, it is still a substantial risk to consider.

EXAMPLE

Refer to Table 10.4 for figures presented in the following strategy.

Strategy: Cash-Secured Put Writing

Assume that an investor writes five XYZ December 55 put options at the current price of $4.85. The put writer receives a premium of $2,425 (calculated as $4.85 ×

100 shares × 5 contracts) to take on the obligation of buying 500 shares of XYZ Inc. at $55 a share on or before the expiration date in December. Because the options are in-the-money (i.e., the strike price is greater than the stock price), the $4.85 premium consists of both intrinsic value and time value. Intrinsic value is equal to $2.50 and time value is equal to $2.35.

If the put writer has an amount of cash equal to the purchase value of the stock set aside, the strategy is a cash-secured put write. The put writer in this case would have to set aside $27,500 (calculated as $55 strike price × 100 shares × 5 contracts).

Some investors actually use cash-secured put writes as a way to buy the stock at an effective price that is lower than the current market price. The effective price is equal to the strike price minus the premium received.

For example, if at expiration in December the price of XYZ stock is less than $55, the put writer will be assigned and will have to buy 500 shares of XYZ at the strike price of $55 per share.

The effective purchase price is actually $50.15 because the put writer received a premium of $4.85 when the options were written. This price is less than the $52.50 price of the stock when the cash-secured put write was established.

If, at expiration in December, the price of XYZ stock is greater than $55, the cash-secured put writer will not be assigned because the options are out-of-the-money. However, he gets to keep the premium of $4.85 and will have to decide whether to use the cash to buy the stock at the market price.

Strategy: Naked Put Writing

Assume that a different investor writes five XYZ December 55 put options at the current price of $4.85. The put writer does not have a short position in 500 shares of XYZ or set aside a specific amount of cash to cover the potential purchase of the stock, so she is considered a naked put writer. The naked put writer wants the price of XYZ to be higher than $55 at expiration. If this happens, the puts will expire worthless and the writer will earn a profit equal to $4.85 a share, the initial premium received.

If the price of XYZ stock falls, however, the naked put writer will most likely realize a loss, because put buyers will exercise their options to sell the stock at the higher strike price. (In this case, she will suffer a loss only if XYZ stock is trading for less than $50.15 at option expiration.) The naked put writer will have to buy stock at a price that is higher than the market price. If she does not want to hold the shares in anticipation of a higher price, she can sell them.

For example, if the price of XYZ falls to $45 at expiration, the naked put writer will suffer a $10 loss on the purchase and sale of the shares (i.e., buy at the strike price of $55, sell at the market price of $45). This loss is offset somewhat by the initial premium of $4.85, so that the actual loss is $5.15 a share, or $2,575 in total (calculated as $5.15 × 100 shares × 5 contracts).

Option Strategies for Corporations

Unlike individual and institutional investors, corporations do not normally speculate with derivatives because they do not want to risk their shareholders' money betting on the price of an underlying asset. They are, however, interested in managing risk, and they often use options to do so. The risks that corporations most often manage are related to interest rates, exchange rates, or commodity prices. For example, corporations regularly take on debt to help finance their operations. Sometimes the interest rate on the debt is a floating rate that rises and falls with market interest rates. Just like the investor who buys a call to establish a maximum purchase price for a stock, corporations can buy a call to establish a maximum interest rate on floating-rate debt.

EXAMPLE

Strategy: Corporate Call Option Purchase

Assume that a Canadian company knows that it will buy US$1 million worth of goods from a U.S. supplier in three months' time. Based on an exchange rate of C$1.32 per U.S. dollar, the U.S. dollar purchase will cost the company C$1.32 million. The company can do two things to secure the US$1 million: buy it now and pay C$1.32 million, or wait three months and pay whatever the exchange rate is at that time. The company would prefer to wait, but by doing so, it faces the risk that the value of the U.S. dollar will strengthen relative to the Canadian dollar. The Canadian dollar cost of the purchase, in such a scenario, would be higher than C$1.32 million.

To protect itself against this risk, the corporation buys a three-month U.S. dollar call option with a strike price of C$1.35. This option can be bought at the Montréal Exchange or in the OTC market. If, at the end of three months, the exchange rate turns out to be C$1.40, the corporation will exercise the call and buy the U.S. dollars for C$1.35 million. If, however, the U.S. dollar weakens so that in three months the exchange rate is C$1.30, the corporation will let the option expire and buy the U.S. dollars at the lower exchange rate. The purchase of the call option has capped the exchange rate at C$1.35, plus the cost of the option.

Strategy: Corporate Put Option Purchase

Assume that a Canadian oil company will have 1 million barrels of crude oil to sell in six months' time. The current price of crude oil is US$40 per barrel, but the company is not sure what the price will be in six months. To lock in a minimum sale price, the company buys a put option on 1 million barrels of crude oil with a strike price of US $38 per barrel. This will protect the company from an oil price lower than US$38 per barrel.

If, in six months, the price of crude oil is less than US$38, the company will exercise its put option and sell the oil to the put option writer at the strike price. If the price is greater than US$38, the company will let the option expire and will sell the oil at the going market price.

KEY OPTION TERMS

How familiar are you with options terminology? *Complete the online learning activity to assess your knowledge.*

Trading Options

Can you describe the trading mechanics of options? *Complete the online learning activity to assess your knowledge.*

Forwards and Futures

5 | Distinguish between forwards and futures contracts and the strategies used by market participants.

A forward is a contract between two parties: a buyer and a seller. The buyer of a forward agrees to buy the underlying asset from the seller on a future date at a price agreed on today. Unlike options agreements, both parties are obligated to participate in the future trade.

Forwards can trade on an exchange or OTC market.

When a forward is traded on an exchange, it is called a futures contract.

Futures are usually classified into two groups, depending on the type of underlying asset:

- **Financial futures** are contracts with a financial asset as the underlying asset. Common underlying assets include:
    - Stocks
    - Bonds
    - Currencies
    - Interest rates
    - Stock Indexes
- Commodity futures are contracts with a physical asset as the underlying asset. Common underlying assets include:
    - Precious and base metals
    - Crude oil and natural gas
    - Grains and oilseeds
    - Meats and dairy
    - Lumber

When a forward is traded over the counter, it is generally referred to as a **forward agreement**. The predominant types of forward agreements are based on interest rates and currencies.

Key Terms and Definitions

Futures are simply exchange-traded forward contracts. As such, they have many of the features inherent to all forward contracts. They are agreements between two parties to buy or sell an underlying asset at a future time at a predetermined price.

The party that agrees to buy the underlying asset holds a *long* position in the futures contract. This party is also said to have bought the futures contract. The party that agrees to sell the underlying asset holds a *short* position in the futures contract, and is said to have sold the futures contract.

The buyer of a futures contract does not pay anything to the seller when the two enter into the contract. Likewise, the seller does not deliver the underlying asset right away. The futures contract simply establishes the price at which a trade will take place in the future. As it turns out, most parties end up offsetting their positions prior to expiration, so that few deliveries actually take place.

If a contract is not offset and is held to the expiration date, the seller is obliged to deliver the underlying asset and accept payments from the buyer. Likewise, the buyer is obliged to accept delivery of the underlying asset and make payments to the seller.

Like all exchange-traded derivatives, futures are standardized with respect to the amount of the asset underlying each contract, expiration dates, and delivery locations. Standardization allows users to offset their contracts prior to expiration and provides the backing of a clearinghouse.

CASH-SETTLED FUTURES

Many financial futures are based on underlying assets that are difficult or even impossible to deliver. For these types of futures, delivery involves an exchange of cash from one party to the other. The amount is based on the performance of the underlying asset from the time that the future was entered into until the time that it expires. These futures are known as cash-settled futures contracts.

An equity index futures contract is an example of a cash-settled futures contract. Parties holding long positions in a stock index futures contract are not obliged to accept delivery of the stocks that make up the index. Likewise, those who are short are not required to deliver the stocks. Instead, if the position is held to the expiration date, either the long or the short will make a cash payment to the other based on the difference between the price agreed to in the futures contract and the price of the underlying asset on the expiration date.

- If the price agreed to in the futures contract is greater than the price of the underlying asset at expiration, prices have fallen, and the long must pay the short.
- If the price agreed to in the futures contract is less than the price of the underlying asset at expiration, prices have risen, and the short must pay the long.

As with all other futures contracts, cash-settled futures can be offset prior to expiration.

MARGIN REQUIREMENTS AND MARKING TO MARKET

Buyers and sellers of futures contracts must deposit and maintain adequate margin in their futures accounts. Futures margins are meant to provide a level of assurance that the financial obligations of the contract will be met. In effect, futures margins represent a good faith deposit or performance bond.

Two levels of margin are used in futures trading: *initial margin* (also called *original margin*) and *maintenance margin*. Initial margin is required when the contract is entered into. Maintenance margin is the minimum account balance that must be maintained while the contract is still open.

Minimum initial and maintenance margin rates for a particular futures contract are set by the exchange on which it trades. Investment dealers may impose higher rates on their clients, but they may not charge less than the exchange minimums.

One of the important features of futures trading is the daily settlement of gains and losses. This process is known as **marking to market**. At the end of each trading day, those holding long positions in a contract make a payment to those who are short, or vice versa, depending on the change in the price of the contract from the previous day.

If either party accumulates losses that cause their account balance to fall below the maintenance margin level, they must deposit additional margin into their futures account.

EXAMPLE

Greg buys a futures contract and Leila sells the same futures contract on the same day. The initial margin required in each account is $2,000, and the maintenance margin is $1,500. Both Greg and Leila put up the initial margin required.

The first day, the futures gain $200. At the end of this day, Greg's account is credited $200 and Leila's is debited $200. Greg's account now shows a balance of $2,200 and Leila's account shows a balance of $1,800.

On the second day, the futures drop $300. At the end of the second day, Greg is debited $300 and Leila is credited $300. Greg's account now shows a balance of $1,900 and Leila's account shows a balance of $2,100.

As you can see, Greg and Leila's accounts are debited and credited each day by the amount of the gain or loss on the futures contract until they offset or close their positions.

When the futures drop another $500 on the third day, Greg's account is debited $500. It now shows a balance of $1,400, which is below the maintenance margin. Greg's dealer sends him a margin call, and Greg must deposit $600 so that the account is back to the initial margin. This is how initial and maintenance margins and marking to market work.

Futures Trading and Leverage

Futures margin requirements are typically 3% to 10% of a contract's value. In contrast, investors can buy or sell equities with margin deposits ranging from 30% to 80%. For example, a $10,000 long position in a security eligible for reduced margin can be arranged with a $3,000 deposit. That same $3,000 deposit, however, could secure a futures position with a value of $100,000. With such a small percentage of a contract's value required to trade, futures contracts become highly leveraged, so it is possible to lose more than the amount of money initially deposited.

Although leverage is often associated with futures trading, it should be noted that it is not inherent in a futures contract. A futures trader could decide to deposit a contract's full value as margin rather than the minimum margin required. For example, a trader that goes long in a gold futures contract could deposit the contract's value of US $120,000 (100 troy ounces at an assumed price of US$1,200 per ounce) as margin. In this scenario, the trader is not leveraged at all.

Futures Exchange

The Montréal Exchange lists financial futures. It offers contracts on index futures, two-year, five-year, and 10-year Government of Canada bonds, bankers' acceptances, and the 30-day overnight repo rate.

Futures Strategies for Investors

Futures are inherently simpler than options. With options there are four basic positions: long a call, short a call, long a put, or short a put. Futures contracts have only two basic positions: long and short. Options also have strike prices, so that an almost uncountable number of different strategies can be designed by combining options with different strike prices and expiration dates, as well as with a position in the underlying asset. The number of strategies that can be designed with futures is limited because there are only two basic positions for each expiration date.

BUYING FUTURES

Investors buy futures either to profit from an expected increase in the price of the underlying asset, or to lock in a purchase price for the asset on some future date. The former application is a speculative strategy, whereas the latter is one of risk management.

Buying Futures to Speculate

Buying a futures contract to profit from the expectation of rising prices is a speculative strategy. This investor probably has no intention of actually buying the underlying asset. Rather, the investor wants to sell the futures contract at a higher price than what was originally paid. The chances of this happening depend primarily on the change in the price of the underlying asset in the spot or cash market. If the spot price of the underlying asset rises, then the price of the futures contract will also rise. Of course, the investor faces the risk that the price of the underlying asset will fall. If this happens, the price of the futures contract will fall as well, and the investor may be forced to sell the contract at a loss.

Buying Futures to Manage Risk

Buying a futures contract to lock in a purchase price is a risk management strategy. In this case, the investor does not offset the contract. At expiration, the investor takes delivery of the underlying asset for the amount agreed upon when the contract was originally bought. The purchase of the futures contracts locks the investor into a pre-determined purchase price of the underlying asset, regardless of what happens to the price of the underlying in the spot market.

SELLING FUTURES

Investors sell futures for the same reasons that they buy them: either to profit from an expected decline in the price of the underlying asset or to lock in a sale price for the asset on some future date.

Selling Futures to Speculate

Selling a futures contract simply to profit from an expectation of lower prices is a speculative strategy. The investor probably has no intention of actually selling the underlying asset. Rather, he or she wants to buy back the futures in the market at a lower price than what the contract originally sold for. The chances of this happening depend primarily on the change in price of the underlying asset in the spot (cash) market.

If the price of the underlying asset falls in the cash market, then the price of the futures contract also falls, and the investor realizes a profit in offsetting the futures contract at a lower price. Of course, the investor faces the risk that the underlying prices will rise. If this happens, the price of the futures contract will rise as well, and the investor may be forced to buy back the contracts at a loss.

Selling Futures to Manage Risk

Selling a futures contract to lock in a selling price is a risk management strategy. In this case, the investor does not offset the contract. At expiration, he or she will be required to sell the underlying asset for the agreed amount when the contract was originally sold. The sale of the futures contract locks the investor into a pre-determined selling price, regardless of what happens to the price of the underlying asset in the spot market.

Futures Strategies for Corporations

Corporations use futures to manage risk in the same way that investors do. When the company needs to lock in the purchase price of an asset, it may decide to buy futures on the asset. Similarly, when the company needs to lock in the sale price of an asset, it may decide to sell futures on the asset.

Even though they take futures positions consistent with their risk management needs, companies usually offset their positions before expiration, rather than actually making or taking delivery of the underlying asset. However, the futures can still satisfy a company's risk management needs by providing price protection.

EXAMPLE

In July, a brewery determines that it will need 100 tonnes of barley in October. Barley is trading in the spot market at $150 a tonne, and October barley futures are trading at $155 a tonne. The brewery's regular barley supplier will not guarantee a fixed price for the October purchase, but instead will charge the spot price on the day that the brewery places the order. To protect itself from a sharp increase in the price of barley, the brewery buys five October barley futures at the current price of $155. Each barley futures contract has an underlying asset of 20 tonnes of barley.

In early October, barley is trading at $170 per tonne in the spot market. At the same time, October barley futures are trading at $171 per tonne. Rather than take delivery by holding its futures position until the expiration date, the brewery would like to buy the barley from its regular supplier. There are three reasons why the brewery might want to deal with its regular supplier:

- The brewery's operations may be located far from the standardized delivery location for barley futures. If the brewery were to take delivery of the barley, it would incur the expense of shipping the barley from the delivery location to its own location.
- The exact quality of the barley that underlies the barley futures contract may not match the quality the brewery normally uses. The brewery's regular supplier would presumably be able to deliver the required quality.
- The standardized delivery date of the barley futures contract may not coincide with the exact date that the brewery requires the barley. Again, the regular supplier would likely be able to deliver on the date the brewery required.

To get out of its obligation to buy barley by way of the futures contracts, the brewery offsets its position by selling five October barley futures at the current price of $171 per tonne. Because the price has risen, and the brewery had a long position, it earns a profit of $16 per tonne on the futures transactions.

At the same time, the brewery places an order to buy 100 tonnes of barley from its supplier. The supplier charges the brewery the current spot price of $170 per tonne. The brewery's effective price, however, is lower because of the futures profit. The net effect is that the brewery ends up paying $154 per tonne, which is equal to the $170 purchase price minus the $16 futures profit. So, even though barley rose $20 from late July to early October, the price the brewery actually pays is only $4 higher than the price back in July. The futures contract provided the brewery with price protection for the majority of the price increase. This process illustrates how companies use futures for price protection, rather than as an outlet to buy or sell the underlying asset.

Forwards and Futures

Can you identify the differences and similarities between the forward and futures contracts? *Complete the online learning activity to assess your knowledge*.

Rights and Warrants

6 | Distinguish between the features, benefits, and intrinsic value of rights and warrants.

Like call options on stocks, **rights** and **warrants** are securities that give their owners the right, but not the obligation, to buy a specific amount of stock at a specified price on or before the expiration date.

Unlike options, however, rights and warrants are usually issued by a company as a method of raising capital. Although they may dilute the positions of existing shareholders if they are exercised, they allow the company to raise capital quickly and cost-effectively.

The other major difference between rights, warrants, and call options is the time to expiration. Rights are usually very short term, with an expiration date often as little as four to six weeks after they are issued. Warrants tend to be issued with three to five years to expiration.

Rights

A right is a privilege granted to an existing shareholder to acquire additional shares directly from the issuing company. There is no cost for shareholders to acquire these rights.

To raise capital by issuing additional common shares, a company may give shareholders rights that allow them to buy additional shares in direct proportion to the number of shares they already own. For example, shareholders may be given one right for each share they own, and the offer may be based on the right to buy one additional share for each 10 shares held. In other words, the company may want to increase its outstanding shares by 10%, so shareholders are given the opportunity to increase their own holdings by 10%.

The exercise price of a right, known as the **subscription price** or **offering price**, is the price shareholders pay to purchase additional shares of the company. The offering price is almost always lower than the market price of the shares at the time that the rights are issued. This discount makes the rights valuable and gives shareholders an incentive to exercise them.

When a company decides to do a rights offering, they announce a **record date** to determine the list of shareholders who will receive the rights, much as they do when they issue a dividend. All common shareholders who are in the record books on the record date receive rights.

On the business day before the record date, the shares trade **ex-rights**. This means that anyone buying shares on or after the ex-rights date is not entitled to receive the rights from the company. Between the date of the announcement that rights will be issued and the ex-rights date, the stock is said to be trading **cum rights**. This term means that anyone who buys the stock is entitled to receive the rights, if they own the stock until at least the record date.

The usual method of making an offering is to issue one right for each outstanding common share. A certain number of these rights are required to buy one new share. In addition to having the correct number of rights required to purchase shares, the subscriber must pay the subscription price to the company to acquire these additional shares. No commission is levied when the rights holder exercises the rights and acquires shares.

The rights are usually listed on the exchange that lists the underlying common stock. The price of the rights tends to rise and fall in the secondary market as the price of the common stock fluctuates, although not necessarily to the same degree.

A rights holder may take one of the following courses of action:

- Exercise some or all of the rights and acquire the shares
- Sell some or all of the rights
- Buy additional rights to trade or exercise later
- Do nothing and let the rights expire worthless

Doing nothing provides no benefit; rights are not automatically exercised on behalf of their holders. The holder must select a course of action appropriate for his or her circumstances.

INTRINSIC VALUE OF RIGHTS

Like options, rights may have intrinsic value. As mentioned previously, rights are normally issued with a subscription price lower than the market price of the stock. This means that they have intrinsic value at the time that they are issued. After they are issued, they will have intrinsic value as long as the market price of the stock stays above the subscription price. Because rights have a short lifespan, they generally have very little time value, although they do have some. As with options, the trading price of a right is equal to the intrinsic value, if any, plus the time value.

Two formulas are used to calculate the intrinsic value of a right: one is used during the ex-rights period; the other is used during the cum rights period.

THE INTRINSIC VALUE OF RIGHTS DURING THE EX-RIGHTS PERIOD

On the business day before the record date, the shares start trading ex-rights, and the rights begin to trade as a separate entity. The intrinsic value of a right during the ex-rights period is calculated using the formula in Figure 10.1.

Figure 10.1 | Intrinsic Value of Rights During the Ex-rights Period

$$\text{Intrinsic Value of Rights} = \frac{S - X}{n}$$

Where:

S = The market price of the stock
X = The exercise or subscription price of the rights
n = The number of rights needed to buy one share

EXAMPLE

On June 1, ABC Co. declares the following rights offering:

> *Shareholders of record on Friday, June 10, will be granted one right for each common share held. Five rights are required to buy one new share at a subscription price of $23. The rights will expire at the close of business on July 6.*

On June 9, the first day of the ex-rights period, the rights begin to trade as a separate security. If on this day ABC shares open for trading at $25, the intrinsic value of each right is $0.40, calculated as follows:

$$\text{Intrinsic Value of Rights} = \frac{\$25 - \$23}{5} = \frac{\$2}{5} = \$0.40$$

THE INTRINSIC VALUE OF RIGHTS DURING THE CUM-RIGHTS PERIOD

A different formula is needed to calculate the intrinsic value of a right during the cum rights period because, during this time, the rights are embedded in the common stock. Because buyers of the stock during the cum rights period are eligible to receive the rights, a portion of the common stock's price represents the value of the rights as well as the value of the stock.

The formula for the intrinsic value of the rights during the cum rights period must take into account the fact that each ABC share includes one right. Adding 1 to the denominator in the cum rights formula takes into account that a right is included in the price of a share during the cum rights period, as shown below:

$$\text{Intrinsic Value of Rights} = \frac{S - X}{n + 1}$$

EXAMPLE

On June 1, ABC Co. declares the following rights offering:

> *Shareholders of record on Friday, June 10, will be granted one right for each common share held. Five rights are required to buy one new share at a subscription price of $23. The rights will expire at the close of business on July 6.*

On June 3, during the cum rights period, the rights have not yet begun to trade as a separate security. If on this day ABC shares open for trading at $25.60, the intrinsic value of each right is $0.43, calculated as follows:

$$\text{Intrinsic Value of Rights} = \frac{\$25.60 - \$23}{6} = \frac{\$2.60}{6} = \$0.43$$

TRADING RIGHTS

If the common shares of the company issuing rights are listed on a stock exchange, the rights are listed on the exchange automatically. Trading in the rights takes place until they expire. The Toronto Stock Exchange (TSX) and TSX Venture Exchange terminate trading in the rights at noon on the expiry day.

Canadian trading practice requires that a rights transaction be settled by the second business day after the transaction takes place. This process is known as *regular* *delivery* and is identical to the settlement period for a stock.

Did You Know?

As expiry approaches, the rules that govern settlement typically change. The rules may vary from exchange to exchange, so it is best to consult the rule book of the relevant exchange to determine the rules that are currently in place.

Warrants

A warrant is a security that gives its holder the right to buy shares in a company from the issuer at a set price for a set period of time. In this sense, warrants are similar to call options. The primary difference between the two is that warrants are issued by the company itself, whereas call options are issued (i.e., written) by other investors.

Warrants are often issued as part of a package that also contains a new debt or preferred share issue. The warrants help make these issues more attractive to buyers by giving them the opportunity to participate in any appreciation of the issuer's common shares. In other words, they function like, and are known, as a **sweetener**.

Once issued, warrants can be sold either immediately or after a certain holding period. The expiration date of warrants, which can extend to several years from the date of issue, is longer than that of a right.

VALUING WARRANTS

Like options, warrants may have both intrinsic value and time value. Intrinsic value is the amount by which the market price of the underlying common stock exceeds the exercise price of the warrant. A warrant has no intrinsic value if the market price of the common stock is less than the exercise price. Time value is the amount by which the market price of the warrant exceeds the intrinsic value.

For example, a warrant to buy one common share at $40 has no intrinsic value when the price of the common stock is $30. However, it could still have a market value of several dollars because, even with no intrinsic value, the market will attach a time value to the warrant. The greater the time remaining to expiration, the longer the period will be during which the underlying common stock may increase in price. The market speculates on this possibility and attaches a value to it; hence the term *time value*. As the expiration date approaches, there is less time for the common stock to increase in value, so the time value also falls. When it expires, an unexercised warrant is worthless.

WHY INVESTORS BUY WARRANTS

The main attraction of warrants is their leverage potential. The market price of a warrant is usually much lower than the price of the underlying security, and generally moves in the same direction at the same time as the price of the underlying. Therefore, the capital appreciation of a warrant on a percentage basis can greatly exceed that of the underlying security.

EXAMPLE

Louis, an investor, buys a warrant. Beatrice, another investor, buys the underlying common stock.

The warrant has the following information:

Market value	$4
Exercise price	$12

$15 Market price of the underlying common stock

This warrant has an intrinsic value of $3 and a time value of $1, calculated as follows:

Intrinsic Value = Market Price of the Underlying – Exercise Price = $15 – $12 = $3

Time Value = Market Value – Intrinsic Value = $4 – $3 = $1

If the common stock rises to $23 per share before the warrants expire, for example, the results are as follows:

- For the warrant buyer: The price will rise from $4 to $11, for a 175% return over the original market value. (The warrants would rise to at least their intrinsic value.)
- For the common stock buyer: The profit would be $8 (calculated as $23 – $15), for a 53% return over the original market price.

Of course, the reverse is also true. Instead of rising from $15 to $23, the stock may decline from $15 to $10. A decline in the price of the common stock from $15 to $10 will result in a 33% loss for the shareholder; whereas, if the warrants fall from $4 to $0.25 (no intrinsic value but still a small amount of time value), the buyer will face a 94% loss.

CASE SCENARIO

Can you help Larry better understand the derivatives course he is taking? *Complete the online learning activity to assess your knowledge.*

KEY TERMS & DEFINITIONS

Can you read some definitions and identify the key terms from this chapter that match? *Complete the online learning activity to assess your knowledge.*

Summary

In this chapter, we discussed the following key aspects of derivatives:

- A derivative is a financial contract between a buyer and a seller. Its value is derived from the value of an underlying asset, which can be a commodity, a financial asset, an index, a currency, or an interest rate. OTC derivatives are customizable, whereas exchange-traded derivatives are standardized contracts.
- An option contract grants the buyer the right to buy or sell the underlying asset by a certain date and imposes an obligation on the seller to complete the transaction if called upon to do so. A forward contract imposes a trading obligation on both the buyer and the seller at a price agreed upon when they enter into the contract.
- The four types of participants in derivatives include individual investors, institutional investors, businesses and corporations, and derivative dealers. Investors, institutions, and businesses use derivatives either to speculate or to hedge risk. Dealers buy and sell derivatives to meet the demands of the end users.
- An option that gives its owner the right to buy the underlying asset is a call option; one that gives the right to sell the underlying asset is a put option. Investors buy call options to lock in a price for a future purchase or to speculate on a future rise in price. They sell call options to generate income.

- An exchange-traded forward contract, which is standardized and regulated, is called a futures contract. Investors buy futures either to profit from an increase in the price of the underlying asset or to lock in the purchase price. They sell futures either to profit from an expected decline in the price of the underlying asset or to lock in the sale price.
- A right is a free privilege granted to a shareholder by an issuing company to acquire additional shares in direct proportion to the number of shares already owned. A warrant is a security that gives its holder the right to buy shares in a company from the issuer at a set price until expiration.

Review Questions

Now that you have completed this chapter, you should be ready to answer the Chapter 10 Review Questions.

Frequently Asked Questions

If you have any questions about this chapter, you may find answers in the online Chapter 10 FAQs.

SECTION 4

THE CORPORATION

Corporations and their Financial Statements

Financing and Listing Securities

Corporations and their Financial Statements

Chapter Overview

In this chapter, you will learn about the three types of business structures, with a particular focus on the corporate structure. You will then learn about the various types of financial statements that corporations use to track their financial position and performance. In the context of public corporations, you will learn the rules of disclosure and the statutory rights of investors. Finally, you will learn the regulations around takeover bids and insider trading.

learning objectives

content areas

1 | Define the three type business structures.	**Corporations and their Structure**
2 | Describe the advantages, disadvantages, process, and structure of corporations	
3 | Describe the structu and purpose of the vari financial statements	**Financial Statements of a Corporation**
4 | Summarize the two components of a company's annual report	**The Annual Report**
5 | Describe the rules fo public company disclos and the statutory rights investors	**Public Company Disclosures and Investor Rights**
6 | Explain the general regulatory and disclosu requirements for takeover bids and insider trading.	**Takeover Bids and Insider Trading**

Key Terms

Key terms are defined in the Glossary and appear in **bold** text in the chapter.

amortization

asset

beneficial owner

book value

capitalization

continuous public disclosure

control position

corporation

cost method

cost of sales

current assets

current liabilities

declining-balance method

deferred tax liabilities

depletion

depreciation

equity

first-in-first-out

goodwill

gross profit

information circular

insider trading

intangible asset

International Financial Reporting Standards

inventory

investments in associates

liabilities

material change

nominee

non-controlling interest

non-current assets

non-current liabilities

partnership

prepaid expenses

private corporation

proxy

public corporations

reporting issuer

retained earnings

share capital

share of profit of associates

sole proprietorship

statement of cash flows

statement of changes in equity

statement of comprehensive income

statement of financial position

straight-line method

takeover bid

trade payables

trade receivables

trustee

voting trust

weighted-average method

Introduction

The investment potential of a corporation's securities depends on the company's future performance, which can be difficult to forecast precisely. However, past performance often provides a clue. Therefore, an investor with some knowledge of a company's present financial position and past financial record is more likely to make a wise investment decision. (Of course, the investor must also understand the industry in which the company operates, the economy in general, and the specific plans and prospects of the company in question to make a sound selection from investment alternatives.)

Whether you are an investor, advisor, or analyst, you must approach a corporation's financial statements as an investigator. Becoming familiar with the information presented in the financial statements is a first step toward making informed investment decisions. Those statements are one of the best ways that a company can communicate the successes and challenges it has experienced to the investing public.

In this chapter, we discuss the different types of financial statements that corporations use and the various components that make up each type. We also examine several aspects of corporations in general, including the corporate structure itself and the various rules and regulations under which corporations operate.

corporations and their structure

1 | Define the three types of business structures.

2 | Describe the advantages, disadvantages, process, and structure of corporations.

A **corporation** is a distinct legal entity separate from the people who own its shares. An incorporated business pays taxes and can sue or be sued in a court of law. Property acquired by the corporation does not belong to the shareholders of the corporation, but to the corporation itself. The shareholders have no liability for the debts of the corporation, and there can be no additional levy on shareholders if the debts of a bankrupt corporation exceed the value of its realizable assets.

Although corporations are the focus of this chapter, you should also be familiar with the other business structures, including **sole proprietorships** and **partnerships**:

- In a sole proprietorship, one person runs the business and is taxed on earnings at his or her personal income tax rate. The owner profits if the venture is successful, but is also personally liable for all debts, losses, and obligations arising from business activities. In other words, there is no distinction between personal assets and **assets** held in the business.

- In a partnership, two or more persons run the business, the structure of which is legislated under the *Partnership Act*. Partnerships can be general or limited. With a general partnership, both (or all) general partners run the day-to-day operations and are personally liable for all debts and obligations incurred in the course of business. With a limited partnership, general partners run the business while limited partners cannot participate in daily business activities. The limited partners' liability is limited to the amount of their investments.

Unlike sole proprietorships and partnerships, corporations are able to raise funds by issuing **equity** or debt, and are thus more suitable for large business ventures.

Advantages and Disadvantages of Incorporation

The advantages and disadvantages of incorporation are summarized below.

Advantages of Incorporation

Limited shareholder liability

The shareholders of a corporation risk only the amount of money they have invested in the corporation’s common shares.
For example, a shareholder who has invested $1,000 in a corporation’s common shares is not liable for additional contributions, even if the corporation were to go bankrupt and have obligations to creditors that exceed the value of its realizable assets.

Continuity of existence

A corporation’s unlimited existence is not affected by the death of any or all of its shareholders. Its existence is terminated only by imposed acts such as bankruptcy of the corporation itself. A corporation is unlike a sole proprietorship, which ends when the proprietor dies. It also differs from a partnership, which terminates upon the death or withdrawal of one partner, unless an agreement to the contrary exists.

Transfer of ownership

Shareholders of a public corporation can usually transfer their shares to other investors with relative ease. This liquidity is an attractive feature of share ownership. And, although the ownership of shares may change, the assets of the corporation continue to be owned by the corporate entity itself.

Ability to finance

Raising capital by issuing different classes of shares and debt instruments is much easier for corporations than for sole proprietorships or partnerships. Limited liability means that investors can contribute capital with a chance of return and without risk beyond the amount of the investment.

Growth

Corporations are structured to easily handle the large amounts of capital needed to operate large and growing businesses.

Professional management

The shareholders are the ultimate owners of the corporation, but they play a very small part in its management. Through their voting rights, they elect a board of directors to manage corporate affairs. If the directors do not manage the corporation to their satisfaction, the shareholders may elect different directors.

Disadvantages of Incorporation

Inflexibility

A corporation is subject to many rules imposed by various statutes. Changes in the charter and by-laws of the corporation can be complicated and sometimes require formal approval of the government of the incorporating jurisdiction, as well as of the directors and shareholders.

Taxation

The possibility of double taxation arises when the after-tax profits of a corporation are distributed in the form of dividends to shareholders, who themselves pay tax on their dividend income.

Expense

After the initial cost of incorporation, annual costs apply that are additional to those incurred in proprietorships or partnerships. Some of those costs include annual returns, audits, preparation of federal and provincial corporate tax returns, the holding of shareholders’ meetings, and, for many corporations, securities laws.

Capital withdrawal

Corporations must carefully follow statutory procedures for the purchase and redemption of shares by the corporation, when permitted by the applicable statute. However, relatively minor investors in a public corporation can withdraw their capital simply by selling their shares on the market.

Private and Public Corporations

Corporations can be either private or public:

- **Private corporations** have charters that restrict the right of shareholders to transfer shares, limit the number of shareholders to no more than 50, and prohibit members from inviting the public to subscribe for their securities.

- **Public corporations** are companies whose shares are listed on a stock exchange or traded over the counter.

Corporate BY-LAWS

A corporation, whether private or public, is regulated by the federal or provincial act under which its charter is issued, by the charter itself, and by various by-laws. A general by-law is prepared at the time of incorporation and contains rules that govern the conduct of the corporation.

The by-laws are passed by the board of directors and approved by the shareholders. Provisions in the by-laws usually deal with the following types of issues:

- Shareholders' and directors' meetings
- Qualification, election, and removal of directors
- Appointment, duties, and remuneration of officers
- Declaration and payment of dividends
- Date of fiscal year end
- Signing authority for documents

VOTING Rights

The common shareholders of a publicly traded company have certain rights based on their equity investment in the company. A very important right is the opportunity to vote on certain company matters at annual meetings and at special or general meetings. Shareholders can vote in the election of the board of directors, who guide and control the business operations of the corporation through its officers. Shareholders can also vote on corporate matters such as the sale, merger, or liquidation of the business, as well as decision regarding a stock split or the amendment of the corporation's charter. Shareholders may also have the right to vote on executive compensation packages.

SHAREHOLDERS' MEETINGS

The list of eligible shareholders is prepared, and is effective, as of a certain date prior to a regular or annual shareholder meeting. Shareholders are then notified of the meeting within a specified time period. At the annual meeting, they elect the directors, appoint independent auditors (or accountants), receive the financial statements and the auditor's (or accountant's) report for the preceding year, and consider other matters regarding the company's affairs. To vote at the annual meeting, shareholders must have shares registered in their own name, or else they must be in possession of a completed proxy form.

VOTING BY PROXY

Corporations see the annual shareholders' meeting as an opportunity to report on their activities to their shareholders. Before the meetings, shareholders receive a proxy statement that outlines what is to be voted on at the meeting.

Every shareholder who is registered on a company's books as owning shares is entitled to vote at the company's annual general meeting. Although shareholders are generally encouraged to attend the annual shareholders' meeting and vote in person, most retail investors cast their votes by **proxy**. The proxy is typically a member of the company's management team who is given authority through power of attorney to vote according to the shareholder's intentions. The shareholder indicates those intentions on a *proxy statement* (or *proxy form*).

The proxy statement must accompany the notice of a shareholders' meeting, along with an **information circular** informing the shareholder of issues for consideration at the annual meeting. Such issues include details about proposed directors, directors' and officers' remuneration, interest of directors and officers in material transactions, the appointment of auditors, and particulars of other matters to be acted upon at the meeting.

The proxy statement must be completed in writing and signed by the shareholder granting the proxy. If a shareholder does not vote or leaves the items on the proxy statement unmarked, the ballot is automatically cast with management's viewpoint. Therefore, it is important for shareholders to read the resolutions carefully and make their intentions clear.

In many public corporations, the management group itself does not own a large percentage of the issued shares and may depend on the support of the shareholders at large. At the annual shareholders' meetings, enough shareholders normally sign proxy forms appointing management nominees as their proxy, so that management is able to carry any resolution it wishes.

However, in some circumstances, a contest might arise for control of the corporation. In such cases, both the management group and the challengers actively seek proxy support from the shareholders at large before the meeting. Although such conflicts are rare, they can lead to the removal of the existing management, if enough shareholders lend support to the challengers.

Dive Deeper

You can view a sample proxy statement by visiting the website of the System for Electronic Document Analysis and Retrieval at www.sedar.com. There, you can access a database that contains public companies' proxy statements, which have been filed with the securities regulators.

Did You Know?

Shares are most often registered in the name of a bank, investment dealer, or the CDS Clearing and Depository Services rather than in the name of the true **beneficial owner** of the shares. In such cases, the institution in whose name the securities are registered is the **nominee**. Nominees must make sure that all beneficial holders are notified of meetings, and that they receive voting instruction forms and other shareholder information.

VOTING TRUSTS

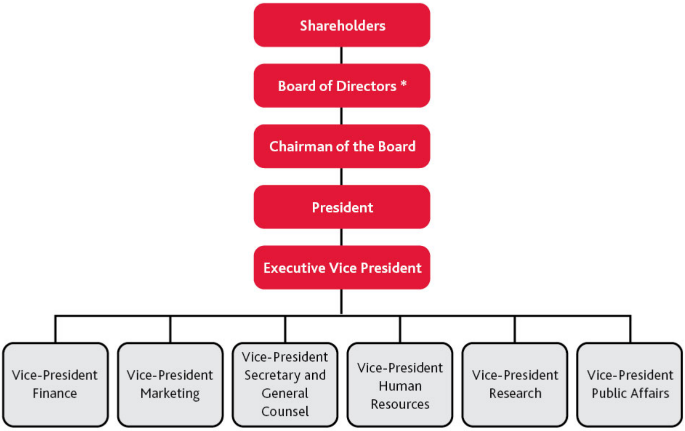
A corporation that is undergoing a restructuring because of financial difficulties may be placed under the control of a few individuals through a **voting trust**. The voting trust is usually put into effect for specific periods, or until certain results have been achieved. This measure is used because financiers may be willing to inject new capital only if they can be assured of control to protect their investment until the corporation recovers.

To transfer voting control, shareholders are asked to deposit their shares with a **trustee** —usually a trust company—under the terms of a voting trust agreement. The trustee issues a voting trust certificate, which returns to the shareholder the same rights possessed by the original shares. Voting privileges, however, remain with the trustee.

The Corporate Structure

A typical corporate structure at the executive level is illustrated in the Figure 11.1.

Figure 11.1 | Simplified Organizational Chart of a Hypothetical Corporation



* Many boards of directors elect executive, finance, and audit committees.

The various members at the top of the corporate structure have the following responsibilities:

Directors

- Directors must be of the age of majority and of sound mind. A director must not be an undischarged bankrupt person.
- They set company policies by passing resolutions.
- They normally appoint and supervise officers and signing authorities for banking, budget approval, financing, and plans for expansion.
- They are normally responsible for the decision to issue shares and declare dividends and other dispositions of profits.
- They are personally liable for illegal acts of the corporation done with their knowledge and consent.
- They are personally responsible for employee wages, declared dividends, and government remittances.
- They must act honestly, in good faith, and in the best interests of the corporation.

Chairman of the board

- The chairman of the board is elected by the board of directors.
- Persons in this position may have all or any of the duties of the president or any other officer of the corporation.
- They may be the chief executive officer.
- They preside over meetings of the board and generally exert great influence on the management of the affairs of the corporation.
- Their job may be combined with that of president.

President

- The president is appointed by and responsible to the board of directors.
- Persons in this position exercise authority through the other officers and through the heads of departments or divisions.
- If the job of president is not combined with that of the chairman, the president may act as chairman in the latter's absence.

Vice-Presidents

- Vice-presidents are appointed by, and responsible to, the president.
- They lead specific areas of the corporation's operations, such as sales or finance.

Officers

- Officers are appointed by the board of directors.
- They are corporate employees responsible for the day-to-day operation of the business.

Financial Statements of a Corporation

3 | Describe the structure and purpose of the various financial statements.

The structure of a corporation helps us understand how the company functions in its day-to-day activity in the marketplace. However, the company's financial statements shows us the company's performance and how it changes over time. Before investing in any company's stocks or bonds, you should be able to interpret its financial statements correctly, analyze them effectively, and compare them with those of other companies.

Canada has adopted the **International Financial Reporting Standards** (IFRS), a globally accepted high-quality accounting standard used by public companies in more than 100 countries.

The international standards are principles-based, with a focus on detailed disclosure, whereas GAAP accounting is a mix of rule- and principles-based accounting. With rule-based accounting, specific procedures are rigidly observed. Financial statements prepared in this way are less ambiguous, but the process is more complex. It is also difficult to create rules that fit every situation.

Principles-based accounting has more general guidelines and broader objectives. For example, IFRS requires corporations to provide extensive and detailed disclosure to explain why particular accounting treatments are used, and enough data to allow an investor to make an objective analysis. As a result, financial statements are more transparent and easier to compare to those of other Canadian publicly traded companies that use the international standards.

Financial statements act as an assessment of the company's financial health and as an overview of its operations: they show what the company owns and how it was financed, as well as how much money it earned or lost over a given period (typically, one year). We will now discuss the structure, components, and purposes of the various corporate financial statements, and explain how they relate to each other.

Statement of Financial Position

The **statement of financial position** shows a company's financial position on a specific date. In annual reports, that date is the last day of the company's fiscal year. Many companies have a fiscal year end that corresponds with the calendar year end (December 31), but this is not a requirement. Banks and trust companies traditionally end their fiscal year on October 31.

Did You Know?

For banks and trust companies, October is the last month of each fiscal year; November is the first month of their next fiscal year.

The statement of financial position shows three items:

- Assets consist of what the company owns and what is owed to it.
- Equity represents the shareholders' interest in the company.
- **Liabilities** are what the company owes.

Equity is also referred to as the **book value** of the company. It represents the excess of the company's assets over its liabilities. Accordingly, the company's total assets are equal to the sum of equity plus the company's liabilities. The company's financial position can be expressed as an equation in two ways, as shown below:

$$\text{Total Assets} = \text{Total Equity} + \text{Total Liabilities}$$

or

$$\text{Total Assets} - \text{Total Liabilities} = \text{Total Equity}$$

A statement of financial position is prepared and presented in more or less the same way for all Canadian publicly traded companies. Appendix A, at the end of this chapter, displays the financial statements of the fictional company Trans-Canada Retail Stores Ltd. as an example. The relationship between items on that company's statement of financial position is shown in Table 11.1.

Table 11.1 | Simplified Statement of Financial Position

Assets	$19,454,000
Total Assets	**$19,454,000**
Equity	$13,306,000
Total Equity	**$13,306,000**
Liabilities	$6,148,000
Total Liabilities	**$6,148,000**
Total Equity and Liabilities	**$19,454,000**

Using the two formulas for the statement of financial position, as noted above, we can express the financial position of Trans-Canada Retail Stores Ltd. as follows:

$$19{,}454{,}000 = 13{,}306{,}000 + 6{,}148{,}000$$

or

$$19{,}454{,}000 - 6{,}148{,}000 = 13{,}306{,}000$$

Did You Know?

Equity represents the total value of a company's assets that shareholders would theoretically receive if the company were liquidated. However, this item does not necessarily indicate the amount that shareholders would actually receive for their ownership interest, in the event of sale. The market value of the shareholders' interest could be worth more or less than the book value, largely depending on the company's earning power and prospects.

We will now explain each category of the statement of financial position for the company Trans-Canada Retail Stores Ltd., in the order that it appears in Appendix A.

Classification of Assets

Assets are classified on a statement of financial position as *current* and *non-current*.

Items 1–3: NON-CURRENT Assets

Non-current assets include property, plant, and equipment (PP&E); **goodwill** and other **intangible assets**; and **investments in associates**. They are shown as items 1 to 3 on the *Trans-Canada Retail Statement of Financial Position*.

Property, Plant and Equipment

The category of PP&E consists of land, buildings, machinery, tools and equipment of all kinds, trucks, furnishings, and other items used in the day-to-day operations of a business. A company's PP&E is valuable because it is used directly in producing the goods and services the company eventually sells. Unlike **current assets**, which are consumed or converted by successive steps into cash, the items that make up a company's PP&E are not intended to be sold.

Property (except land), plant, and equipment wear out over time or otherwise lose their usefulness. Between the time that a given asset is acquired and the time when it is no longer economically useful, it decreases in value. This loss over a period of years is known as **depreciation**.

Timber companies and other industries involved in resource extraction use the term **depletion**, which is similar to the term depreciation used by mining, oil, natural gas. The assets of resource extraction industries consist largely of natural wealth such as minerals in the ground or standing timber. As these assets are developed and sold, the company loses part of its assets with each sale. Such assets are known as wasting assets, and depletion is the annual decrease in value the company records.

In contrast, **amortization** is the term used to describe the gradual writing off of intangible assets such as patents or trademarks.

Did You Know?

Calculating Depreciation

Items in the PP&E category are initially shown on the statement of financial position at original cost, including certain costs of acquisition (such as installation costs). Except for land, PP&E items are depreciated each year (i.e., reduced in value to reflect wear and tear), and the total accumulated depreciation is deducted from the original cost.

To spread the cost of PP&E items over their years of useful service, companies record depreciation expenses in each year's **statement of comprehensive income**. PP&E items are used in the process of producing goods or services. Therefore, their depreciation is a cost of doing business, similar to wages and other expenses.

The amount recorded as depreciation each year is based on the original cost of each asset, its expected useful life, and any residual value.

Two commonly used methods of calculating depreciation are the *straight-line method* and the *declining-balance method*:

- The straight line method applies an *equal amount* to each period. This is the method used most frequently in Canada by public companies.
- The declining-balance method applies a *fixed percentage*, rather than a fixed dollar amount, to the outstanding balance to determine the expense to be charged in each period. This amount is then deducted from the capital asset balance to determine the amount against which the percentage will be applied in the subsequent period (thus the term *declining balance*). The declining-balance method typically uses some multiple of the straight line rate.

The equation used for the straight line method is shown in Figure 11.2.

Figure 11.2 | Calculating Annual Depreciation Expense

Straight Line Method

$$\text{Annual Depreciation Expense} = \frac{\text{Original Value} - \text{Residual Value}}{\text{Expected Life}}$$

Where:

Original Value = Cost of purchase
Residual Value = Value at end of useful life
Expected Life = Expected number of years of useful life

The two methods of calculating depreciation are compared in the example below.

EXAMPLE

Straight-Line Method: A piece of equipment bought by XYZ Co. Ltd. at $100,000 is expected to have a useful life of eight years and a residual value of $10,000 at the end of the asset's useful life. Using the straight-line method, the annual depreciation for this asset is calculated as follows:

$$\frac{100{,}000 - 10{,}000}{8} = \$11{,}250$$

The depreciation rate is therefore 12.5% (calculated as 100% ÷ 8) per year for each of the eight years of expected usefulness.

Declining-Balance Method: Let's assume that XYZ instead chooses to use a depreciation rate of 25% (double the straight-line rate) under the declining-balance method on each year's remaining balance. The calculation is as follows:

In year 1, $100,000 depreciates at 25%, which equals $25,000. In year 2, $75,000 (calculated as $100,000 – $25,000) depreciates at 25%, which equals $18,750.

The annual calculations for each of the two methods are compared and illustrated in Table 11.2.

Remember that the cost of the asset is $100,000, the residual value is $10,000, and its useful life is eight years. The carrying amount shown in the table is the amount recorded each year on the statement of financial position.

Table 11.2 | Straight-Line Method versus Declining-Balance Method for Depreciation

STRAIGHT-LINE METHOD / DECLINING-BALANCE METHOD
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

Depreciation is intended to allocate the cost (minus residual value) of the company's PP&E over the useful lives of the assets. It provides a realistic matching of earnings to expenses in a fiscal period to determine a company's net or comprehensive income on an annual basis. The depreciation method, estimated life, and valuations must be reviewed each year according to the IFRS accounting system.

Note that annual allowances for depreciation, depletion, and amortization appear as non-cash expenses in the statement of comprehensive income. Therefore, it is quite possible for a company to add considerable amounts to its cash resources for the year —and yet show little or no profit—if substantial depreciation, depletion, or amortization charges were made. These effects are reflected in the **statement of cash flows**, where the cash from operations is reported.

An accounting activity called **capitalization** records an expenditure as an asset, rather than an expense. The purpose of this activity, related to depreciation, is to spread the amount over more than one accounting period. When a company capitalizes an asset, profit in the year of acquisition is affected to a much lesser degree.

EXAMPLE

Ajax Inc. purchases a piece of machinery for $10 million. Instead of recording the purchase as an expense on the statement of comprehensive income, the company records it as an asset on the statement of financial position. As an asset, its value then depreciates over a number of years.

If the company had recorded the $10 million cost on its statement of comprehensive income as an expense in the year it was incurred, the purchase would have had a substantial impact on a company's profit for that year.

Under IFRS, fewer acquisition-related costs are allowed to be capitalized; instead, they must be expensed in the year of acquisition.

Goodwill and Other Intangible Assets

Goodwill is often defined as the probability that a regular customer of a company will continue to do business with that company because of its location or its reputation for fair dealing and good products. People in the habit of doing business with a firm are likely to continue that habit even when the firm changes hands. For that reason, a buyer of a business is often willing to pay for the good name of that business, or for its continued good management, in addition to the value of its assets.

Goodwill appears on the purchasing company's statement of financial position as the excess of the amount paid for the shares over their net asset value.

Intangible assets are non-monetary assets that do not have physical substance. They can be sold, licensed, or transferred, but they usually decline greatly in value when a company is liquidated. Some common examples are patents, copyrights, franchises, and trademarks.

In general, the value given to intangible assets on the statement of financial position should be viewed with caution. Their value is connected more to their contribution to earning power than to their saleability as assets. For example, a trademark may have worth to a business in terms of brand recognition, yet its dollar value would be difficult to assess if it were to be sold on its own.

Investment in Associates

Investment in associates refers to the degree of ownership that a company has in another company. As a general rule, significant influence is presumed to exist when a company owns at least 20% – but less than half – of the voting rights of the other company.

Items 5–8: CURRENT ASSETS

Current assets are assets that will be realized, consumed, or sold in the normal course of business, typically within one year. They include **inventory**, **prepaid expenses**, and **trade receivables**, as well as cash and cash equivalents. Current assets are the most important group of assets because they largely determine a firm's ability to pay its day-to-day operating expenses.

Current assets are shown as Items 5 to 8 on the *Trans-Canada Retail Statement of Financial Position* (Appendix A).

Inventory

Inventory consists of the goods and supplies that a company keeps in stock. For example, a furniture manufacturer that sells chairs to Trans-Canada Retail would have inventories of raw materials (the fabric and wood used to build the chairs), work-in-progress (the assembled chair frames), and finished goods (the completed chairs ready for shipping).

Inventories are changed into cash through successive steps as raw materials are processed into finished goods. Finished goods sold on credit rather than for cash give rise to trade receivables, which are eventually paid off in cash. This process goes on day after day, providing the funds to enable the company to pay for wages, raw materials, taxes, and other expenses. Ultimately, inventories provide the profits out of which dividends may be paid to shareholders.

Inventories are valued at original cost or net realizable value, whichever is lower. You can think of net realizable value as the expected sale price less the costs associated with selling the asset. The following two methods are commonly used to determine the value of inventories at original cost:

- The **weighted-average method** uses the average of the total cost of the goods purchased over the period on a per unit basis.
- The **first-in-first-out** (FIFO) method implies that items acquired earliest are assumed to be used or sold first.

EXAMPLE

A computer company manufactured 1,000 hard drives last month, at a cost of $125 each, and an additional 1,000 units this month, at a cost of $150 each. (The higher costs relate to rising raw materials prices.) The company sells 1,000 hard drives today.

Under the FIFO method, the inventory is valued as follows:

- The cost of the goods sold is $125 per hard drive, because that was the cost of each of the first hard drives into inventory.
- The remaining hard drives are valued at the more recent and higher cost of $150 each, which works out to an inventory value of $150,000, calculated as 1,000 hard drives × $150 = $150,000.

Under the weighted-average method, the inventory is valued as follows:

- The total cost of the hard drives is $275,000, calculated as (1,000 × $125) + (1,000 × $150) = $125,000 + $150,000 = $275,000.
- The average cost of the inventory is $137.50, calculated as $275,000 ÷ 2,000

units = $137.50.

- The cost of the goods sold is $137.50 per hard drive.
- The inventory value reported on the statement of financial position is $137,500, calculated as $137.50 × 1,000 = $137,500.

As shown in the above example, if prices are changing, each of these methods produces a different inventory value on the statement of financial position. Consequently, the two methods show a different profit, based on the costs of the goods sold. As you will learn when we discuss the statement of comprehensive income later in this chapter, a lower cost of goods sold results in higher profits for the company.

Prepaid Expenses

Prepaid expenses are payments made by the company for services to be received in the near future. Prepaid expenses are the equivalent of cash because they eliminate the need to pay cash for goods or services in the immediate future. (Nevertheless, IFRS treats these expenses as an entry separate from cash and cash equivalents.)

Rents, insurance premiums, and taxes, when paid in advance, are examples of prepaid expenses.

Trade Receivables

The trade receivables category represents money owing to a company for goods or services it has sold. Because some customers fail to pay their bills, an item called *allowance for doubtful accounts* is often subtracted from receivables. This allowance is management's estimate of the amount that will not be collected.

The net amount of trade receivables is shown on the statement of financial position *as trade receivables minus the allowance for doubtful accounts*.

Cash and Cash Equivalents

The cash and cash equivalents category represents cash on hand, funds in the company's bank accounts, or funds held in short-term investments. These items hold minimal risk of a change in value and are readily convertible into cash.

Classification of Equity

We now turn our attention to the various categories of equity shown in the statement of financial position. The items in this section represent shareholders' equity, which is the amount that shareholders have at risk in the business. This category includes **share capital**, **retained earnings**, and **non-controlling interest**, which are shown on the statement of financial position as Items 11 to 13.

Item 11: Share Capital

Share capital is the money paid in by shareholders. This is the amount received by the company for its shares at the time that they were issued. Therefore, the share capital shown on the statement of financial position is not related in any way to the current market price of the outstanding shares. Share capital does not change from year to year unless the company issues new shares or buys back outstanding shares.

Item 12: Retained Earnings

Retained earnings represent the profits earned over time that have not been paid out as dividends—in other words, the portion of annual earnings retained by the company after payment of all expenses and the distribution of all dividends. The earnings retained each year are reinvested in the business. The reinvestment of accumulated earnings may be held in cash or reinvested in inventories, property, or any other of the company's assets.

If a company suffers a loss in any year, the loss is deducted from the retained earnings. In this event, each shareholder's ownership interest in the company is reduced because the retained earnings amount has been reduced. If more losses than earnings accumulate, the result is a deficit.

Item 13: Non-controlling Interest

Non-controlling interest appears as a category when a company owns more than 50% of a subsidiary company and consolidates its financial statements. In other words, the company combines all the assets, liabilities, and operating accounts of the parent company with those of its subsidiary or subsidiaries into a single joint statement.

Even when the parent company owns less than 100% of a subsidiary's stock, all of the subsidiary's assets and liabilities are combined in the consolidated financial statements. However, the part of the subsidiary that is not owned by the parent company is shown in the statement of financial position as *non-controlling interest*. This item is the interest or ownership that outsiders have in the subsidiary company. Under IFRS, non-controlling interest is presented separately from the parent company's shareholders' equity.

Classification of Liabilities

As with assets, liabilities are classified on the statement of financial position as *current* and *non-current*.

Items 15 and 16: Non-Current Liabilities

Non-current liabilities include long-term debt and **deferred tax liabilities**. These items are shown as Items 15 and 16 on the *Trans-Canada Retail Statement of Financial Position* (Appendix A).

Long-Term Debt

The long-term debt of a company is debt that is due in annual instalments over a period of years, or else in a lump sum in a future year. The most common of these debts are mortgages, bonds, and debentures. Frequently, capital assets classified as PP&E are pledged as security for such borrowings. Any portion of long-term debt that is due within the current year is shown as a current item.

It is customary to describe long-term debt items in the notes to the financial statements. Notes must be detailed enough to tell the reader what kind of security is provided on the loan, what interest rate is carried, when the debt becomes repayable, and what sinking fund provision, if any, is made for repayment.

Deferred Tax Liabilities

The deferred tax liabilities category represents income tax payable in future periods. These liabilities commonly result from temporary differences between the book value of assets and liabilities as reported on the statement of financial position and the amount attributed to that asset or liability for income tax purposes. The difference between these two amounts is multiplied by a future tax rate to arrive at the tax amount owing for the period.

Items 18–21: Current Liabilities

For the most part, **current liabilities** are debts incurred by a company in the ordinary course of its business that must be paid within the company's normal operating cycle (typically, one year). The *Trans-Canada Retail Statement of Financial Position* shows four common types of current liabilities (items 18 to 21):

- Current portion of long-term debt due in one year
- Taxes payable to the government in the near term
- **Trade payables** (unpaid bills for items such as raw materials and supplies)
- Short-term borrowings from financial institutions

Did You Know?

When calculating a company's debt ratios (see Chapter 14 for more information on ratios), it is important to distinguish between debts, such as short-term borrowings and bonds, and other types of liabilities, such as trade payables and taxes owed. Only debts incurred by borrowing are included in ratios involving debt.

Statement of Comprehensive Income

The statement of comprehensive income shows how much money a company earned during the year compared to how much money it spent. The difference between the two amounts is the company's profit or loss for the year, out of which dividends may be paid to the shareholders.

The statement of comprehensive income reveals the following information about a company:

- Where earnings come from
- Where earnings go
- The adequacy of earnings, both to assure the successful operation of the company and to provide income for the holders of its securities

Did You Know?

When analyzing the financial condition of a company, its earning power and cash flow are of primary interest. The proof of a company's financial strength and security lies in its ability to generate earnings and, through those earnings, cash flow. Evidence of the adequacy of these items is provided by both the statement of comprehensive income and the statement of cash flows.

Structure of the Statement of Comprehensive Income

The first section of the statement of comprehensive income typically has three parts: *revenue*, *cost of sales*, and *gross profit*.

Simply put, gross profit is the amount remaining after the cost of sales is subtracted from revenue.

After gross profit is determined, other income is added and general expenses are subtracted to arrive at total comprehensive income.

The various categories of the *Trans-Canada Retail Statement of Comprehensive Income* are explained in detail below.

Items 24–26: Revenue, Cost of Sales, and Gross Profit

Revenue

Revenue is a key figure in the statement of comprehensive income. It consists of income made from the sale of products or services. For example, if the company is a public utility, it derives income from the sale of gas or electricity. Revenue is the figure needed to calculate various ratios, such as net and gross profit margins, that are used to determine the soundness of a company's financial position. These ratios are used by credit managers, bankers, and security analysts in making a detailed investigation of a company's financial affairs.

Cost of Sales

Expenses that arise in producing the income received from the sale of the company's products or services are deducted from revenue. The first such deduction, in the case of a manufacturing or merchandising business, is termed **cost of sales**. This item includes costs of labour, raw materials, fuel and power, supplies and services, and other kinds of expenses that go directly into the cost of manufacturing, or in the case of a merchandising company, expenses that go directly into the cost of goods purchased for resale.

Although all statements of comprehensive income provide the same financial information, a company can use one of the following two formats, depending on how expenses are disclosed:

- By nature of their use (e.g., depreciation, raw materials, and employee benefits)
- By function (e.g., cost of sales, administrative, and distribution)

Note: The *Trans-Canada Retail Statement of Comprehensive Income* discloses expenses by function.

GROSS PROFIT

After deducting the cost of sales from the amount of revenue we have the company's **gross profit** figure for the period. This figure is significant because it measures the margin of profit or spread between the cost of goods produced for sale and revenue.

When the percentage of gross profit to revenue is calculated and compared with those of other companies engaged in the same line of business, it provides an indication of whether the company's merchandising operations are more or less successful in producing profits than its competitors. Between different companies in the same business, differences in the margin of gross profit generally reflect differences in managerial ability.

Item 27: Other Income

Generally, a company has two main sources of income, revenue and other income.

Revenue is derived from the sale of products or services, whereas other income is not directly related to a company's normal operating activities. This category includes dividends and interest from investments, rents, and sometimes profits from the sale of PP&E.

Good accounting practice requires that revenue and other income be shown separately in the statement of comprehensive income, especially if the other income is substantial. It is important to separate the two categories; otherwise, it would be impossible to gain a true picture of the company's real earning power based on its main operations. For example, a company might realize a substantial profit from the sale of securities or some other asset in one year. However, a profit of this kind is not likely to be repeated the next year. To combine it with revenue would give a false impression of the company's earning power. Therefore, other income is added *after* gross profit is calculated.

Items 28 to 31: General Expenses

After other income is added to gross profit, the following general expenses are deducted:

- Distribution costs, including such expenses as advertising costs and salaries and commissions to sales personnel
- Administrative expenses, including office salaries, accounting staff salaries, and office supplies
- Other expenses not directly related to the company's normal operating activities, including expenses associated with the sale of PP&E
- Finance costs in the form of interest payments on debtholders' securities or loans to the company

The distribution of income to creditors is usually made in the form of fixed interest charges to banks and other debtholders who have lent money to the company. These interest charges are paid out of income before taxes and are fixed in the sense that the amount of interest that has to be paid on borrowed money is definite. For example, if the company has $1,000,000 worth of bonds outstanding in the hands of investors, and these bonds bear interest at the rate of 9% per annum, the interest to be paid each year is a fixed amount of $90,000.

Interest charges are also fixed, which means that they must be paid before any income is distributed to shareholders. A default in payment would give creditors the right to place the company in receivership and put the company at risk of bankruptcy.

Item 32: Share of Profit of Associates

Share of profit of associates occurs when one company's investment in another company creates significant influence without gaining control, and when each company has its own financial statements. The equity accounting method is used to capture the income received from the investment. Traditionally, a company has significant influence (but falls short of control) when it owns at least 20%—but less than half—of voting shares.

EXAMPLE

Trans-Canada Retail Stores Ltd. owns 25% of Alberta Retail Stores Ltd. Alberta Retail Stores earned $20,000 (after tax) in a particular fiscal year. In its statement of comprehensive income, Trans-Canada Retail Stores reports $5,000 of this amount (25% × $20,000) as share of profit of associates.

The **cost method** of accounting is primarily used for ownership holdings that do not result in significant influence (traditionally ownership of less than 20%) and where investments in other companies are reported in the form of investments on the financial statements.

Certain profit calculations must be adjusted for share of profit of associates because the company reports this income but does not actually receive it in cash. Therefore, share of profit of associates is a non-cash *source* of funds—just as depreciation, amortization, and depletion are non-cash *uses* of funds. Company profit must be reduced by the amount of share of profit of associates when calculating ratios, when a true picture of the company's cash profit is required (see also item 32 on the consolidated statement of cash flows).

If an entity under a company's significant influence experiences a loss, the company reports its share of the loss on its statement of comprehensive income. This entry is called *share of loss of associates*, and reduces profit on the statement. As with share of profit of associates, a share of loss of associates is a non-cash item. The amount of the share of loss of associates must therefore be added back to the company's profit when calculating ratios to show a true picture of the company's cash profit.

Item 33: Income Tax Expense

Income tax expense includes both current tax and deferred tax for the time period. The notes to the company's financial statements provide additional information on this topic.

Item 34: Profit

The next step in the statement of comprehensive income is the calculation of profit (or loss). This is the amount of profit from the year's operations that may be available for distribution to shareholders.

Note: The section called *other comprehensive income* on the *Trans-Canada Retail Statement of Comprehensive Income* has no entries. However, on another company's statement, this section might include the following items:

- Actuarial gains and losses on defined benefit plans
- Gains and losses from currency translations relating to the financial statements of a foreign operation

The total comprehensive income (Item 35) consists of the profit (or *loss*) plus the other comprehensive income. At this point, total comprehensive income is transferred to the **statement of changes in equity**.

Statement of Changes In Equity

The statement of changes in equity is used to record changes to each component of equity, including share capital and retained earnings (items 11 and 12 on the *statement of financial position*). It also records any change in non-controlling interest (item 13 on the *statement of financial position*).

Retained Earnings

Retained earnings are profits earned over the years that have not been paid out to shareholders as dividends. These retained profits accrue to the shareholders, but the directors have decided to reinvest them in the business for now. Retained earnings provide a record of the total comprehensive income kept in the business year after year.

A portion of the total comprehensive income for the current year is added to (or, in the event of a loss, *subtracted from*) the balance of retained earnings shown in the statement of financial position from the previous year. Dividends declared during the year are subtracted from retained earnings in the statement of changes in equity.

A new final retained earnings figure is determined and carried to the statement of financial position where it appears in the equity section (item 12).

The statement of changes in equity is important because it provides a link between the statement of comprehensive income and the statement of financial position.

The consolidated statement of changes in equity also discloses the profit or loss to the non-controlling interests and to the parent company. (In our example, the parent company is Trans-Canada Retail.)

TOTAL COMPREHENSIVE INCOME

The statement of changes in equity shows the company's total comprehensive income in the form of retained earnings. It also shows the amount of total comprehensive income that is attributable to non-controlling interests.

The total comprehensive income attributable to the owners of the company represents the total comprehensive income of the company minus the total comprehensive income attributable to the non-controlling interests.

EXAMPLE

A company owns 80% of the shares of a subsidiary, and the subsidiary had total comprehensive income of $1,000,000 last year. The subsidiary's total comprehensive income of $1,000,000 is included in the total comprehensive income of the parent company. The statement of comprehensive income shows $200,000 as income attributable to non-controlling interests, which represents the 20% of the subsidiary that is not owned by the parent company.

Statement of Cash Flows

As we discussed earlier, the statement of financial position shows a company's financial position at a specific point in time, and the statement of comprehensive income summarizes the company's operating activities for the year. Neither statement, however, shows how the company's financial position changed from one period to the next. The statement of cash flows fills this gap by showing how the company generated and spent its cash during the year.

The statement of cash flows helps the reader to evaluate the liquidity and solvency of a company and assess its overall quality. The assessment should address the following questions:

- Can the company pay its creditors, especially in business downturns?
- Can it fund its needs internally, if necessary?
- Can it reinvest while continuing to pay dividends to shareholders?

A review of the statement of cash flows over a number of years may illustrate trends that might otherwise go unnoticed. This statement often provides a clearer picture of the viability of a company than does the statement of comprehensive income because it measures actual cash generated from the business.

For the purposes of the statement of cash flows, the item cash and cash equivalents includes cash on hand or in the company's bank accounts as well as short-term, highly liquid investments that are readily convertible into known amounts of cash (with little risk of a change in value). The statement of cash flows details the changes in cash and cash equivalents and the reasons for those changes.

Structure of the Statement of Cash Flows

A statement of cash flows shows the company's cash flows for the period under the following three headings:

- Operating Activities
- Financing Activities
- Investing Activities

This statement also shows the increase or decrease in cash in the current fiscal year.

The various categories of the *Trans-Canada Retail Statement of Cash Flows* are explained in detail below.

Items 34 to 37: Operating Activities

The statement of cash flows begins by looking at those accounts that directly reflect the business activities of the company. Those activities are actions that require an inflow or outflow of cash and that generate sales and expenses during the year.

The statement begins with profit (item 34). Added back to profit are all items not involving cash, such as depreciation and amortization. Share of profit of associates (item 32) is subtracted because it is not an actual cash transaction for the company.

Item 37, *change in net working capital*, represents changes in the various asset and liability accounts that appear on the statement of financial position.

Net working capital items include the following accounts:

- Trade receivables
- Inventories
- Trade payables
- Interest payable
- Taxes payable

The dollar amounts of these accounts in the current year are compared to the same amounts in the previous year. The change in each account is then recorded in the statement of cash flows.

Note: Because the previous year's financial statements of Trans-Canada Retail are not provided, the calculation of *change in net working capital* (item 37) is not shown in the text.

EXAMPLE

The trade receivables account at Ajax Inc. records invoices that have been sent to customers but not yet paid. The company includes the sales in revenue but has not yet received the money. When the invoice is paid, the receivables account declines as the cash account increases. These changes must be tracked in the statement of cash flows to show an accurate picture of the company's position.

For example, if trade receivables increase substantially in the current year, the company's sales revenue will be much higher than the amount of cash collected over the period. This discrepancy may require further investigation on the part of the analyst. It could indicate that the receivables department is poorly managed or that the company is extending credit to customers that are unable to pay.

More importantly, a company needs a regular stream of cash flowing into the business to maintain its operations. If credit sales go uncollected for an extended period, the company may have difficulty paying its bills or meeting interest charges.

The company may look good on paper because its revenues are up. However, as demonstrated by the statement of comprehensive income, it may soon be in serious financial difficulty, if it cannot generate enough cash to pay its creditors.

Items 38 to 41: Financing Activities

Cash flows from financing activities involve transactions used to finance the company.

- If the company has issued new share capital (item 38) or debt (item 40), cash flows into the company.
- If the company repays debt (item 39) or pays dividends to the shareholders (item 41), cash flows out of the company.

This section is of particular interest to the shareholders of the company because it highlights changes to a company's capital structure—the overall use of debt and equity financing. A substantial increase in debt, or issuance of new shares, may negatively affect the shareholders' equity in the company.

Note: Dividends paid to shareholders could be placed in either the operating activities section or the financing activities section. Trans-Canada Retail has chosen to place them in the financing activities section.

Items 42 to 44: Investing Activities

Investing activities highlight what the company did with any money not used in its direct operation. This section includes any investments made in the company itself, such as the purchase of new capital assets (item 42) or disposal of such assets (item 43). As well, this part includes any dividends actually received from associates (item 44).

Note: Dividends from associates could be placed in either the operating activities section or the investing activities section. Trans-Canada Retail has chosen to place them in the investing activities section.

Items 45 and 46: The Change in Cash Flow

The final section of the statement of cash flows sums up the cash flows from operating, investing, and financing activities to arrive at the increase or decrease in cash (item 45) for the current fiscal year. Because the statement of cash flows looks at the actual change in the cash position for the year, the final balance in cash and cash equivalents (item 46) comprises cash and cash equivalents found in the year-end statement of financial position for Trans-Canada Retail (item 8).

Ideally, the company should always have a positive net cash flow. If it does not, it is important to find out why. The IFRS accounting approach requires additional disclosures not normally seen with the Canadian GAAP approach. For example, the company should disclose whether the financial statements represent a single entity or a group of entities, and whether the measurement basis is historical cost or fair value. These disclosures help the reader to understand the rationale behind the presentation of facts.

the Annual Report

4 | Summarize the two key components of a company's annual report.

A corporation's annual report is a publication for shareholders that provides an overview of the firm's finances and a review of its activities over the course of the previous year.

Two important components of a company's annual report are the notes to financial statements and the auditor's report.

Notes to the Financial Statements

A considerable amount of detailed information about a company's financial condition must be disclosed in the shareholders' interest. Much of this information is shown in a series of notes to the financial statements, rather than in the statements themselves. The company's notes include the following items: its statement of compliance with IFRS; the accounting policies used; more detailed descriptions of fixed assets, share capital, and long-term debt; and commitments and contingencies. Potential investors should also look in the notes to ascertain whether the company uses derivatives for hedging or other purposes.

The Auditor's Report

Canadian corporate law requires that every limited company appoint an auditor to represent shareholders and report to them annually on the company's financial statements. The auditor must express an opinion in writing as to the fairness of those statements. The auditor is appointed at the company's annual meeting by a resolution of the shareholders and may also be dismissed by them. The only exception to this requirement is for privately held corporations, where all shareholders have agreed that an audit is not necessary.

Public Company Disclosures and Investor Rights

5 | Describe the rules for public company disclosure and the statutory rights of investors.

Securities legislation in each of the provinces requires the continuous disclosure of certain prescribed information concerning the business and affairs of public companies. This disclosure usually consists of periodic financial statements (including management discussion and analysis), insider trading reports, information circulars required in proxy solicitation, the annual information form, press releases, and material change reports.

The principle of disclosure is also evident in the requirements of the acts, regulations, and policy statements of most provinces covering a distribution of securities. Generally, every person or corporation that sells or offers to sell to the public securities that have not previously been distributed to the public, or which come from a **control position**, is required to file with, and obtain the approval of, the administrator in the province. The seller must deliver to the purchaser a prospectus containing full, true, and plain disclosure of all material facts related to the issue.

Did You Know?

A control position refers to ownership of more than 20% of the voting stock in a company that is sufficient to materially affect its affairs.

Continuous Disclosure

A **reporting issuer** is a corporation that has issued securities to the public and must comply with the timely and **continuous public disclosure** requirements of the securities acts. The primary disclosure requirements include issuing a press release and filing a **material change** report with the administrators, if a material change occurs.

A material change is a change in the business, operations, or capital of an issuer that would reasonably be expected to have a significant effect on the market price or value of its securities.

Issuers must also file with the administrators annual and interim financial statements that meet prescribed standards of disclosure. Companies are required to ensure that no confidential material information is selectively disclosed to third parties. Situations where such disclosure might occur include meetings with financial analysts and restricted conference calls with institutional investors. By taping all such discussions and reviewing the tapes immediately after all meetings or conference calls, a company can determine whether any previously undisclosed confidential material information was inadvertently disclosed. If it was, an immediate press release by one of its responsible officers should be released, and the appropriate regulators should be notified of the inadvertent disclosure.

Most companies usually provide financial statements in the required form to all shareholders and send additional copies to the appropriate administrators.

The financial disclosure provisions also require that shareholders and administrators be provided with the following information:

- Comparative audited annual financial statements should be sent within 120 days of the financial year-end for companies listed on the TSX Venture Exchange, or within 90 days for issuers on the TSX.
- Comparative unaudited quarterly interim financial statements should be sent within 60 days of the end of each of the first three quarters of the financial year, for companies listed on the TSX Venture Exchange, or within 45 days, for issuers on the TSX.

Statutory Rights of Investors

The Canadian Securities Administrators have adopted a statement of withdrawal and rescission rights for purchasers to be included in all prospectuses (National Instrument 41-101 *General Prospectus Requirements*). These rights can be summarized according to the conditions described below.

Right of Withdrawal

Securities legislation in all provinces provides purchasers with the right to withdraw from an agreement to purchase securities within two business days after receipt or deemed receipt of a prospectus or any amendment to the prospectus. The purchaser must give notice to the vendor or its agent. Where a distribution requiring a prospectus is completed without a prospectus, most provinces permit a purchaser who still owns the security to revoke the transaction, subject to applicable time limits. In Quebec, the purchaser can apply for an adjustment of the purchase price.

Right of Rescission

Securities legislation gives purchasers the right to rescind or *cancel* a completed contract for the purchase of securities if the prospectus or amended prospectus offering the security contains a misrepresentation. This right is provided on condition that the action to enforce it is brought within the applicable time limits. In most provinces, a purchaser alleging misrepresentation must choose between the remedy of rescission and the alternative of damages.

Right of Action for Damages

The right of action for damages as granted by most securities legislation provides that an issuer and its directors, and anyone who signs a prospectus, may be liable for damages if the prospectus contains a misrepresentation. The same liability applies to an expert (such as an auditor, lawyer, geologist, or appraiser), whose report or opinion appears with his or her consent in a prospectus. Experts are only liable if the misrepresentation is with respect to their report or opinion.

Legislation provides a number of defences to an action for rescission or damages based on a misrepresentation. For example, if the underwriter or directors conducted a thorough enough investigation to provide reasonable grounds to believe that there has been no misrepresentation, they cannot be held liable. A defence is also available if the person or company can prove that the purchaser bought the securities with knowledge of the misrepresentation. Furthermore, securities legislation imposes certain limitations with respect to maximum liability, as well as time limits during which an action may be brought.

Takeover Bids and Insider Trading

6 | Explain the general regulatory and disclosure requirements for takeover bids and insider trading.

The securities legislation of most provinces contains provisions regulating **takeover bids**. This legislation is designed to safeguard the position of shareholders of a company that is the target of a takeover by ensuring that each shareholder has a reasonable opportunity and adequate information to consider the bid.

Most provinces also require insiders of a reporting issuer to file reports of their trading in its securities. This requirement is based on the principle that shareholders and other interested persons should be regularly informed of the market activity of insiders. In addition, insiders who make use of *undisclosed information* must give an accounting of their profits and may be liable for damages. Takeover bids and **insider trading** are explained in detail below.

Takeover Bids

A takeover bid is an offer to purchase from a company's shareholders more than 20% of the outstanding voting securities of the company (or a number of shares that, when combined with the offeror's existing shares, exceeds 20%). Outstanding voting securities are those voting shares that are owned by shareholders and are available for trading. In a takeover, the company or individual making the offer, if successful, obtains enough shares to control the targeted company. The definition of a takeover includes an offer to purchase, an acceptance of an offer to sell, and a combination of the two.

A takeover bid must comply with provincial legislation, unless it is exempted under the relevant act.

EARLY WARNING DISCLOSURE

Most provincial acts state that every person or company accumulating 10% or more of the outstanding voting securities of any class of a reporting issuer, or securities convertible into such securities, must issue a press release immediately. The press release and report must include a statement of the purpose of the acquisition and any future intentions to increase ownership or control.

After a formal bid is made for voting securities of a reporting issuer, and before the expiry of the bid, every person or company acquiring 5% or more of the securities of the class subject to the bid (other than the offeror under the bid) must issue a press release reporting this information.

Insider Trading

Definition of INSIDERS

For the purposes of disclosure, insiders generally include any of the following entities:

- the directors of the issuer;
- the senior officers of the issuer, who are defined as the chair or vice-chair of the board of directors, the president, any vice-president, the secretary, the treasurer or the general manager of the issuer, or any other individual who performs functions for the issuer similar to those normally performed by an individual occupying any such office, and each of the five highest paid employees of the issuer, including any individual referred to above;
- any person or company (excluding underwriters in the course of public distribution) beneficially owning, directly or indirectly, or controlling or directing more than 10% of the voting rights attached to all voting securities; and
- any director or senior officer of a company that is a subsidiary of the issuer or is itself an insider due to ownership, control or direction over more than 10% of the voting rights attached to all voting securities of the issuer involved.

In some circumstances, if a corporation becomes an insider of a second corporation, an insider of the first corporation may be deemed to be an insider of the second corporation as well. When dealing with trades relating to securities of a company that has been involved in such transactions, care should be taken to ascertain whether the persons involved are deemed under the relevant legislation to be insiders.

The securities acts and the Canada Business Corporations Act contain provisions that deem certain persons or companies that become insiders of an issuer to have been insiders of the issuer for a period of up to six months before the event.

INSIDER REPORTING

Insiders must inform the relevant securities commissions when they become insiders and when they transact in securities of the company in which they are insiders. Reports must state the extent of the insider’s direct or indirect beneficial ownership of, or control or direction over, securities of the company. Securities firms should be aware that most acts require an insider who transfers securities of a reporting issuer into the name of an agent, nominee, or custodian to file a report with the administrator. Transfers for the purpose of collateral for a debt are exempt from this rule.

All reports filed with the administrator are open for public inspection, and in some cases summaries are published in the administrator's regular publication. Failing to file an insider report, giving false information, or providing misleading information are offences under the acts and are usually punishable by a fine.

Financial Statements Review

How well do you understand the key features of the various financial statements? *Complete the online learning activity to assess your knowledge*.

Case Study: NFR Inc.

In this case study activity, you'll review the background of NFR Inc., a fictitious Canadian company that operates in the retail segment. You'll then have the opportunity to practice categorizing and calculating specific financial statement items, and you'll decide on which financial statement the item belongs. This activity will help you interpret a corporation's financial statements and understand the company's current financial position. *Complete the online learning activity to assess your knowledge*.

KEY TERMS & DEFINITIONS

Can you read some definitions and identify the key terms from this chapter that match? *Complete the online learning activity to assess your knowledge.*

Summary

In this chapter, we discussed the following key aspects of corporations and their financial statements:

- Unlike the owners of a sole proprietorship or partnership, a corporation's owners are not personally liable for debts, losses, or obligations arising from its business activities. A corporation is owned by its shareholders but is taxed as a separate legal entity. Property of the corporation belongs to the corporation, not to the shareholders. Corporations can raise funds by issuing debt or equity.
- A corporation's financial statements show what the company owns, how it was financed, and how much money it earned or lost over a given period:
    - The statement of financial position presents a snapshot of a company's operations at a specific date. The statement shows the book value of its assets (what the business owns), liabilities (what the business owes), and equity (the claim on the company's assets by its owners).
    - The statement of comprehensive income shows a company's profitability in terms of the revenue received from selling its products, the expenses incurred to generate the revenue, and the profit for the company.
    - The statement of changes in equity records the profits kept in the business and provides a direct link with the statement of comprehensive income and statement of financial position.
    - The statement of cash flows shows how a company generated and spent its cash during the period and reports the net change in the cash account over the period.
- A corporation's annual report provides an overview of the firm's finances and a review of its activities over the course of the previous year. Notes to the financial

statements in this report provide important details about the company's financial condition not reported in the actual financial statements. The auditor's report presents an independent opinion on the financial statements of the company being audited.

- After distributing securities to the public, a reporting issuer must comply with the timely and continuous public disclosure of information. Disclosure can include issuing a press release or filing a material change report when significant changes to the company's operations occur.
- Investors in the securities of a public company have three statutory rights: the right of withdrawal, the right of rescission, and the right to take legal action for damages.
- A takeover bid is an offer to purchase the shares of the company that will exceed 20% of the outstanding voting securities of the company. A takeover bid must comply with provincial legislation unless it is exempted under the relevant act. Likewise, any trading activity by insiders of a corporation is subject to regulations regarding reporting and disclosure.

Review Questions

Now that you have completed this chapter, you should be ready to answer the Chapter 11 Review Questions.

Frequently Asked Questions

If you have any questions about this chapter, you may find answers in the online Chapter 11 FAQs.

Appendix A – Sample Financial Statements

The financial statements on the following pages should be referred to when reviewing this chapter. To make them easier to understand, these financial statements differ from real financial statements in the following ways:

- Comparative (previous year's) figures are not shown.
- *Notes to Financial Statements* are not included.
- The consecutive numbers on the left-hand side of the statements, which are used in explaining ratio calculations, do not appear in real reports.

Note: Trans-Canada Retail Stores Ltd. is assumed to be a non-food retail chain.

Trans-Canada Retail Stores Ltd.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

as at December 31, 20XX

ASSETS

1.	Property, plant, and equipment	6,149,000$
2.	Goodwill	150,000
3.	Investments in associates	917,000
4.	TOTAL NON-CURRENT ASSETS	7,216,000
5.	Inventories	9,035,000
6.	Prepaid expenses	59,000
7.	Trade receivables	975,000
8.	Cash and cash equivalents	2,169,000

9. Total Current Assets	12,238,000
10. TOTAL ASSETS	19,454,000
EQUITY AND LIABILITIES	
11. Share capital	2,314,000
12. Retained earnings	10,835,000
	13,149,000
13. Non-controlling interest	157,000
14. TOTAL EQUITY	13,306,000
15. Long-term debt	1,350,000
16. Deferred tax liabilities	485,000
17. TOTAL NON-CURRENT LIABILITIES	1,835,000
18. Current portion of long-term debt	120,000
19. Taxes payable	398,000
20. Trade payables	2,165,000
21. Short-term borrowings	1,630,000
22. TOTAL CURRENT LIABILITIES	4,313,000
23. TOTAL EQUITY AND LIABILITIES	19,454,000

Approved on behalf of the Board:
[Signature], Director
[Signature], Director

Trans-Canada Retail Stores Ltd.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

For the year ended December 31, 20XX

OPERATING SECTION	
24. Revenue	43,800,000
25. Cost of sales	(28,250,000)
26. Gross Profit	15,550,000
27. Other income	130,000
28. Distribution costs	(7,984,800)
29. Administration expenses	(4,657,800)
30. Other expenses	(665,400)
31. Finance costs	(289,000)
32. Share of profit of associates	5,000
33. Income tax expense	(880,000)
34. Profit	1,208,000
Other comprehensive income	0
35. Total comprehensive income	1,208,000

Trans-Canada Retail Stores Ltd.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the year ended December 31, 20XX

	[illegible]
Balance at January 1, 20XX	[illegible]
Changes in equity for 20XX	
Issue of share capital	750,000
Dividends	(387,500)
Total comprehensive income	[illegible]
Balance at December 31, 20XX	[illegible]

Trans-Canada Retail Stores Ltd.

CONSOLIDATED STATEMENT OF CASH FLOWS

For the year ended December 31, 20XX

OPERATING ACTIVITIES	
34. Profit	1,208,000$
Add or (subtract) items not involving cash	
36. Depreciation	496,000
32. Share of profit of associates	(5,000)
37. Change in net working capital	(401,000)
NET CASH FLOW PROVIDED BY OPE~~RATING ACTIVI~~TIES	1,298,000$

Trans-Canada Retail Stores Ltd.
CONSOLIDATED STATEMENT OF CASH FLOWS
For the year ended December 31, 20XX

FINANCING ACTIVITIES	
38. Proceeds from issue of share capital	750,000$
39. Repayment of long-term debt	(400,000)
40. Proceeds from new long-term debt	50,000
41. Dividends Paid	(387,500)
NET CASH PROVIDED BY FINANCING ~~ACTIVITIES~~	12,500$
INVESTING ACTIVITIES	
42. Acquisitions of capital assets	(900,000)$
43. Proceeds from disposal of capital assets	75,000
44. Dividends received from associates	2,000
NET CASH FLOW USED IN INVESTING ~~ACTIVITIES~~	(823,000)$
45. INCREASE IN CASH AND CASH EQUIVALENTS	487,500
46. CASH AND CASH EQUIVALENTS—YEAR END	2,169,000

AUDITORS' REPORT

To the Shareholders of Trans-Canada Retail Stores Ltd.

We have audited the statement of financial position of Trans-Canada Retail Stores Ltd. as at December 31, 20XX and the statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with International Financial Reporting Standards.

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with International Standards of Auditing. Those standards require that we comply with ethical requirements and plan and perform an audit to obtain reasonable assurance whether the consolidated financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risk of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes assessing the appropriateness of accounting principles used and the reasonableness of accounting estimates made by management, as well as evaluating the overall financial statement presentation.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

In our opinion, these financial statements give a true and fair view of the financial position of the company as at December 31, 20XX and of their financial performance and cash flows for the year then ended in accordance with International Financial Reporting Standards.

Toronto, Ontario
February 8, 20XX [Signature of Auditors]

Financing and Listing Securities

Chapter Overview

In this chapter, you will learn about the process by which governments and corporations raise debt or equity capital and bring their securities to market. You will learn about prospectus requirements and the process of after-market stabilization. You will also learn the means by which securities are distributed through the exchanges, as well as the methods of distributing securities other than on an exchange. Finally, you will learn about the listing process, including the advantages and disadvantages of listing and the circumstances under which trading privileges can be withdrawn.

learning objectives	content areas
1 | Describe the proces governments and corporations use to raise capital to finance funding requirements	**Government and Corporate Finance**
2 | Describe the dealer' advisory relationship wi corporations	**The Dealer's Advisory Relationship with Corporations**
3 | Summarize the prospectus system and after-market stabilization process.	**Bringing Securities to the Market**
4 | Identify other metho distributing securities to public through stock exchanges	**Other Methods of Distributing Securities to the Public**
5 | Describe the advant and disadvantages of listing shares	**The Listing Process**
6 | Describe the circumstances under which exchanges can withdraw trading privileges.	

Key Terms

Key terms are defined in the Glossary and appear in **bold** text in the chapter.

after-market stabilization

authorized shares

banking group

best efforts

blue skyed

bought deal

broker of record

Capital Pool Company

competitive tender

continuous disclosure

covenant

crowdfunding

delayed opening

delisting

direct bond

due diligence report

escrowed shares

final prospectus

financing

financing group

firm commitment

government securities distributor

greensheet

Greenshoe option

guaranteed bond

halt in trading

initial public offering

issued shares

listing agreement

market capitalization

market out clause

material fact

negotiated offering

NEX

non-competitive tender

outstanding shares

over-allotment option

preliminary prospectus

primary dealers

primary offering

private placement

prospectus

public float

qualifying transaction

red herring prospectus

secondary offering

selling group

short form prospectus

suspension in trading

syndicate

transparency

treasury shares

trust deed restrictions

underwriting

waiting period

Introduction

So far in this course we have covered the many different types of financial securities and the roles that the various financial intermediaries and markets play. You also learned about a corporation's structure and financial statements. In this chapter, you will learn how a company has its securities listed on a stock exchange so that investors can trade them.

Stocks go through a complex process before they can be listed on a stock exchange. In addition to regulatory requirements that must be met, listing companies incur significant financial expenses. The process, which is established and rigorous, has been refined over the years to protect investors and maintain the integrity of the capital markets.

New and exciting issues that become available when a private company goes public are regularly discussed in the financial media. However, before a new issue reaches that stage, the issuing company faces many challenges. Financial institutions have specific departments to handle securities offerings, and to ensure that the company issues securities that investors will be interested in buying.

In this chapter, we discuss the various requirements that governments and corporations must adhere to during the complex process of raising capital by listing securities in the various markets.

Government and Corporate Finance

1 | Describe the process governments and corporations use to raise capital to finance funding requirements.

Governments and corporations often need to raise capital to finance their operations, which they do through the **financing** process (also known as **underwriting**). Government financing is often accomplished through an auction process, and occasionally through a fiscal agency.

Public financing is undertaken by public companies that trade on exchanges and over-the-counter (OTC) markets. Private financing is discussed only briefly in this chapter.

Investment Dealer Finance Department

The finance department of an investment dealer helps corporations and governments achieve their funding targets by acting as an intermediary between investors and the issuers of the debt and equity securities. Two distinct groups typically coexist in this department: *government finance* and *corporate finance*.

Government Finance

The government finance department specializes in selling debt instruments to institutions and other interested parties. It also advises both clients and the issuing governments on debt issues. The persons charged with the responsibility of government finance must be in touch with the market at all times to ensure awareness of market conditions and prices. They advise the issuing government on the following concerns:

- The size (or dollar value), coupon (interest rate offered), and currency of denomination of the issue
- The timing of the issue

- Whether the issue should be domestic or foreign
- What effect the issue may have on the market
- Whether the issue should be a new maturity, or whether a previous issue should be reopened

Corporate Finance

Corporate financing is a careful balancing act in which the dealer must balance the needs of the corporate client seeking funds with those of the investing public who provide the funds. The dealer must also balance current market conditions in both the debt and equity markets with the limitations of the company's statement of financial position and future prospects. The job requires skill in market timing, technical knowledge of legal and financial matters, and a thorough understanding of financial analysis and promotion. The dealer must consider the following factors regarding a new issue:

- Types of securities
- Timing to market
- Private or public offering
- Proportion directed to institutional and retail investors
- Pricing
- Coupon rate or valuation multiple (such as price-to-earnings ratio)
- Underwriting fee (charged to the corporation)

Canadian Government Issues

The Canadian Government issues new fixed-coupon marketable bonds and Treasury bills to the market regularly through the **competitive tender** system. The securities are issued by way of an auction, whereby the amount won at the auction is based on the bids submitted.

Only institutions recognized as **government securities distributors** are permitted to submit bids to the Bank of Canada. Government securities distributors may submit bids for their own accounts and on behalf of their customers. These institutions include the Schedule I and Schedule II banks, investment dealers, and foreign dealers active in the distribution of government securities. Government securities distributors that maintain a certain threshold of activity are known as **primary dealers**.

Bids can also be submitted on a **non-competitive tender** basis, whereby the bid is accepted in full by the Bank of Canada and bonds are awarded at the auction average yield.

To maintain regularity and **transparency** in its debt operations, the Government holds regularly scheduled quarterly auctions for benchmark bonds of two, five, and 10 years, as well as semi-annual auctions for the benchmark 30-year bond. The bonds can be purchased in multiples of $1,000 (face value).

Did You Know?

To learn how the tender system works, as illustrated in the following example, visit the Bank of Canada website and download the document *Standard Terms for Auctions of Government of Canada Securities*.

EXAMPLE

Consider an auction of $2.5 billion Government of Canada 10-year bonds, for which ten government securities distributors submit bids in the following manner:

Bidder	Competitive Bid Size	Bid Yield*
1	$500 million	5.0411%
2	$500 million	5.0423%
3	$500 million	5.0433%
4	$500 million	5.0441%
5	$500 million	5.0457%
6	$500 million	5.0468%
7	$500 million	5.0478%
Non-Competitive Tenders	$25 million	

* Bond yields are discussed in detail in Chapter 7.

In this situation, bonds are allocated to the first five competitive bidders only, awarded from lowest yield to highest. Because of the inverse relationship between bond yield and price, the bidder who submits the lowest yield is offering to pay the highest price for the bonds. Conversely, the bidder who submits the highest yield is offering to pay the lowest price. For that reason, the government awards bonds first to the lowest yield submitted and then, in rising order, to the next four bidders.

The first four bidders each receive $500 million of bonds, which represents their total bid amounts.

The fifth bidder receives $475 million of bonds, which is equal to its bid amount of $500 million minus the $25 million amount of non-competitive bids. Each of the five successful competitive bidders pays a price based on its competitive bid yield. The non-competitive bidders receive $25 million of bonds, paying a price based on the average yield of the bonds awarded (i.e., the average yield of the five accepted bids, or 5.0436%). No bonds are allocated to bidders 6 and 7 because their bids are too high.

Provincial and Municipal Issues

New issues of provincial **direct bonds** and **guaranteed bonds** offered in Canada are usually sold at a negotiated price through a fiscal agent. Direct bonds are issued in the government's name (e.g., Province of Manitoba bonds). Guaranteed bonds are issued in the name of a crown corporation, with repayment guaranteed by the provincial government. For example, the Province of Ontario guarantees the bonds issued by the Ontario Electricity Financial Corporation.

Under the provincial method, a provincial government appoints a group of investment dealers and banks, called a **syndicate**, to underwrite issues, offer advice, and manage the process of issuing securities. The syndicate usually includes many major dealers, whose combined financial responsibility and distribution powers are more than adequate to underwrite and sell the large issues required by these parties.

Municipal bond and debenture issues are more likely to be placed in institutional portfolios and pension accounts. These issues require in-depth knowledge of the tax-generating potential of the local municipal area. The dealer must also understand the industrial base and other demographic information.

Corporate Financing

Very few companies generate enough cash internally to satisfy their operational needs, hence the need for corporate financing. Canadian corporate financing usually occurs through a **negotiated offering**. With this method, a corporation's management negotiates with a dealer to determine the type of security, price, interest, or valuation multiple, as well as any special features and protective provisions that may be needed to ensure the success of the new issue.

Corporations raise capital by selling shares (equity financing) or by issuing debt or fixed-income securities (debt financing).

Equity Financing

Equity financing refers to raising capital by selling common shares to investors. In many cases, charters also authorize the use of preferred or special shares. These shares may be non-voting, but they have a special status compared to common shares in terms of dividends, distribution of assets in liquidation, and other preferential treatment. Both common shares and preferred shares form the company's share capital.

SHARE CAPITAL

Authorized shares are the maximum number of shares (either common or preferred) that a corporation may issue under the terms of its charter. A company may have more shares authorized than it has issued to shareholders. This withholding of authorized shares allows the corporation to raise additional funds in the future by issuing more shares. A corporation may also amend its charter to increase or decrease the number of authorized shares.

EXAMPLE

The charter of ABC Inc. indicates that it has 10,000,000 common shares authorized. The company's statement of changes in equity has the following entry:

Common Shares – Authorized 10,000,000 shares of no par value

Issued shares consist of the portion of authorized shares that the corporation has issued, either to the investing public, to company insiders, or to large institutional investors such as a mutual fund. Collectively, these shares owned by all shareholders are called **outstanding shares**.

The capital stock section of the statement of changes in equity indicates the number of shares that a company currently has issued and that are outstanding (i.e., owned by shareholders).

From time to time, a corporation may repurchase some of its issued shares from various classes to hold in its treasury. Under normal circumstances, this activity reduces the number of shares outstanding. If the corporation chooses not to repurchase issued shares, the total number of issued shares remains the same as the total number of shares outstanding.

A company's outstanding shares determine its **market capitalization**. Therefore, the total dollar value of the company is based on the current market price of its issued shares that are currently outstanding.

EXAMPLES

Example 1

ABC Inc. has 10,000,000 shares authorized, and issued 6,000,000 shares to investors. The company recently bought back 150,000 shares, so its statement of changes in equity shows the following information:

> Common Shares – Authorized 10,000,000 shares of no par value – Issued 6,000,000 shares and 5,850,000 shares outstanding.

Shares are currently trading at a price of $10 per share. Therefore, ABC Inc.'s market capitalization is $58,500,000 (calculated as 5,850,000 X 10).

Example 2

DEF Inc. has 1,500,000 shares authorized. The company issued 1,000,000 shares to investors. DEF Inc.'s statement of changes in equity shows the following information:

> Common Shares – Authorized 1,500,000 shares of no par value – Issued and outstanding 1,000,000 shares

If DEF Inc.'s shares are currently trading at $10 per share, its market capitalization is $10,000,000.

Not all of a company's outstanding shares are available for trading by the investing public. For example, shares held by insiders or by a mutual fund are generally held over the long term and therefore tied up. The **public float** refers to that portion of outstanding shares that are freely available for public trading. It excludes shares held by company officers and directors and by institutions with a controlling interest in the company.

The public float can provide insight into a company's stock. When fewer of a company's shares are available in the market, any large buy or sell orders on the stock will have a more dramatic effect on its price. Conversely, a larger float means the stock price is likely to be more stable because it is less affected by large trades. Thus, the smaller the public float, the more volatile the stock price is likely to be.

EXAMPLE

GHI Inc. has 6,000,000 common shares outstanding. Large institutions and the company's officers and directors own 2,200,000 common shares. GHI Inc.'s public float is therefore 3,800,000 shares.

Debt Financing and Other Alternatives

A corporation with a need for a large amount of new capital may also undertake debt financing. Unlike equity financing, funds raised by issuing debt securities represent a loan from investors that must be repaid.

The two main types of securities used in long-term debt financing are mortgage bonds and debentures. Mortgage bonds are backed by a specific pledge of assets, such as land or properties, much like a mortgage loan on a house is secured by the house itself to protect the lender's investment. Debentures are backed only by the general creditworthiness of the corporation. The corporation's ability to repay its obligations is considered sufficient, without a specific pledge of its assets.

In practice, a corporation has many other financing options, including bank loans, money market borrowing, commercial paper, bankers' acceptances, leasing, government grants, and export financing assistance.

THE DEALER'S ADVISORY RELATIONSHIP WITH CORPORATIONS

2 | Describe the dealer's advisory relationship with corporations.

When a corporation decides to undertake financing, it secures the services of a dealer. Selecting a lead dealer involves various considerations about the dealer's reputation for providing advisory services on timing, amount, and pricing of an issue. As well, the lead dealer provides advice on issue distribution, after-issue market support, and after-issue market informational support. Obtaining a reputable dealer also tends to result in better market acceptance of the issue and cheaper financing for the issuing corporation.

When negotiations for a new issue of securities begin between the dealer and corporate issuer, the dealer normally prepares a thorough assessment of the corporation and its industry. The study includes the corporation's position within the industry, financial record, financial structure, and future prospects. As well, all risk factors associated with the industry and the company are closely observed. The resulting assessment is sometimes referred to as a **due diligence report**.

Various experts in the appropriate field may be consulted, such as engineers, geologists, management professionals, or chartered accountants. After the study is completed, the dealer determines whether or not to continue negotiations as the lead dealer in the proposed offering.

The dealer may not necessarily choose to act as principal or agent for the corporate financing. Regardless, the issuing corporation relies on the dealer's advice and guidance to design the various features of the securities. The corporation may develop a close advisory relationship with the lead dealer, similar to the professional relationship between a lawyer and client.

Once the relationship is solidified, the dealer may become the **broker of record** with the right of first refusal on new financings planned by the corporation.

ADVICE ON THE SECURITY TO BE ISSUED

The lead dealer's corporate finance team plays an important role in designing the new issue and advising the corporation on the best approach to pursue in the market. The corporation wants to ensure that the new securities are consistent with the firm's capitalization (i.e., the way the firm is financed with debt and equity), and also that the restrictive provisions included in the new securities do not limit the corporation's future decision-making flexibility. Based on the dealer's assessment of current market conditions, investor preferences, the impact of various financing options on the corporation's existing capitalization, future earnings stability, and prospects, the dealer recommends an appropriate financing vehicle.

When considering the merits of recommending a debt issue, rather than an equity issue, the dealer considers the advantages and disadvantages of each type of financing. Table 12.1 summarizes these considerations.

Table 12.1 | Issuing Securities

Type of Security	Advantages	Disadvantages
Bonds	• Bonds have a lower interest rate than comparable debentures.	• Bonds are less flexible because the assets are pledged to a trustee.

	• They are marketable to institutions that require debt issues secured by assets.	• They can be problematic in mergers and acquisitions because of pledges against specific assets. • They require regular interest payments, the omission of which can lead to default.
Debentures	• They are more flexible because there are no specific pledges. • The cost of issue is lower because there is no registration of assets.	• Interest rates can be higher than that of a comparable bond because of the lack of pledge on specific assets. • They require regular interest payments, the omission of which can lead to default.
Preferred Shares	• Technically, preferred shares are considered equity. Therefore, the company can increase debt outstanding and still maintain a stable debt-to-equity ratio, if the issue is successful. • Omission of a dividend payment does not trigger a default, as interest on a bond or debenture would. • They provide greater flexibility in financing because of the lack of pledge of assets. • They have a limited lifespan because they can be redeemed through the open market, lottery, or purchase fund.	• Their cost is higher because the dividends are paid with after-tax income. The high cost can increase the cost of equity. • Occasionally, non-payment of dividends on preferred issues can trigger the imposition of voting privileges for preferred shareholders. • A purchase fund can be a drain on company assets during recessionary times.
Common Shares	• There is no obligation to pay dividends. • No repayment of capital is required. • The larger equity base can support more debt. • The market value of the company can be established for estate purposes, mergers, or takeovers.	• Earnings are diluted for existing shareholders upon the issuance of additional shares. • Dividends, if paid, are more expensive than interest because they are paid with after-tax dollars. • A higher underwriting discount than on a debt issue is charged.

ADVICE ON PROTECTIVE PROVISIONS

The dealer provides advice to the corporation about the security's specific attributes. For bonds, the dealer may offer advice on the interest rate, the redemption process, and refunding provisions. The dealer may also provide advice on various protective clauses of bonds called protective provisions, **trust deed restrictions**, or **covenants**. These clauses appear in the trust deed.

In the case of a mortgage bond secured by assets, these clauses are known as a *deed of trust and mortgage;* in the case of a corporate debenture, they are known as a *trust indenture*. These clauses are essentially safeguards placed in the issue's contract with the purchaser to guard against any further weakening in the position of the security holder, in case that the issuer's financial position weakens.

Protective provisions may make an issue more appealing to investors. A company in a weak financial condition may need to raise the number of provisions or make them more stringent and restrictive to float a new issue, unlike a company with greater financial strength.

The Method of Offering

Another service that the dealer provides is help in deciding how the issue is to be distributed or sold. Corporate financing can take the form of a **private placement**, a **primary offering**, or a **secondary offering**. A primary offering is commonly known as an **initial public offering** (IPO) if a corporation issues shares to the public for the very first time.

PRIVATE PLACEMENT

In a private placement, the entire issue is sold to one or several large institutional investors. The issuer solicits one or more large investors such as banks, mutual fund companies, insurance companies, or pension funds. Placements are generally offered to sophisticated investors and institutional clients. Therefore, the requirements for detailed disclosure and public notice are typically waived and a formal **prospectus** is not prepared. This waiver dramatically reduces the cost of distribution for the issuing company. In many cases, private placements are announced after they have occurred, usually through advertisements in the financial press.

PUBLIC OFFERINGS

In a public offering, the corporation and the dealer come to a preliminary agreement to determine if the dealer will act as an agent or as a principal.

In a **best efforts** underwriting agreement, the dealer acts as an agent and make its best efforts to sell the securities to the public. If the securities do not sell, the issuer does not receive the proceeds of the sale of the securities, and the unsold securities are returned to the issuer. The issuer faces the risk of not raising the capital that it had intended.

In a **firm commitment** underwriting agreement, also known as a **bought deal**, the underwriter acts as a principal and commits to buy a specified number of securities at a set price, which it then resells to the public. The firm commitment can be initiated either by the issuing corporation or by the dealer member syndicate. In a firm commitment, the underwriter pays the full proceeds to the issuer, regardless of whether it has been able to resell the securities to the public. The underwriter assumes the risk of selling the security. Presumably, on the basis of having performed due diligence, the underwriter perceives the risk to be low.

In the early stages of negotiation, the two parties establish the dealer’s commission (if acting as agent) or the spread between the proposed offering price and the dealer’s cost price (if acting as principal). The offering price and various other details are not normally finalized until just before the public offering date. The pricing of the issue and the actual volume of securities issued are dependent on the market environment at the issue date.

A primary offering of securities requires a great deal of expertise and finesse by the underwriter, especially in terms of the pricing and marketing of the issue. The way the issue is handled can affect the financial well-being of the company for years to come.

In a related tactic, a company may repurchase some of its outstanding shares currently trading in the market. These repurchased shares, called **treasury shares**, do not have voting rights or dividend entitlements. However, the company does have the option of selling them again back to the market at a later date, when the voting rights and dividend entitlements of those shares are restored.

Like the primary offering, a secondary offering is usually also handled by an investment dealer or syndicate. A secondary offering refers to previously issued stock being sold by shareholders, who are usually in a control position.

A firm commitment agreement to issue bonds often involves various different groups. The issuing company sells bonds to a **financing group**. The financing group is the lead underwriter, also known as the managing underwriter or syndicate manager. The bonds are then offered for public resale at the par value price of 100.

The financing group is in continuous contact with the issuing company. Its members make recommendations on the type, size, and timing of the issue. They also advise regarding covenants or protective clauses, the currency of payment, and pricing. Financing group members also arrange for such items as the preparation of the prospectus and the trust deed, the clearing of the issue with securities commissions, and the provision of selling documents. The financing group accepts the liability of the issue on behalf of all its members.

In addition to the financing group, the **banking group** consists of additional dealers, all of whom have previously agreed to participate on set terms and to accept a liability up to their individual participation.

The initial designation of bonds set up by the financing group may be altered as the sale of the issue progresses. However, various different groups may be allotted responsibility for different components of the bond issue, as follows:

- The banking group consists of additional dealers with liability for their participation, as noted above.
- The **selling group** consists of other dealers who are not members of the banking group.
- Casual dealers are non-members of the banking or selling group. They may include broker dealers, foreign dealers, or banks.
- Special group orders may occur under various circumstances. For example, the issuer may demand special consideration for a dealer or its banker, or for its parent's banker, if it is a subsidiary of a foreign parent.
- A portion may be allotted for sale to the exempt list. This list usually includes only large professional buyers, mostly financial institutions, that are exempt from prospectus requirements.

Debt and Equity Financing

Can you explain the differences between debt financing and equity financing? *Complete the online learning activity to assess your knowledge*.

Bringing Securities to the Market

3 | Summarize the prospectus system and the after-market stabilization process.

Securities administrators have long been concerned that funds should not be raised from the public through the issuance of securities without a number of safeguards and disclosure requirements being satisfied. These safeguards are in place to ensure the integrity of the capital markets, but also to permit the orderly flow of capital into the economy to support those companies that are seeking capital. The desire is to balance these two competing demands so that clients wishing to invest can do so on an informed basis. These concerns have led to the development of various procedures and disclosure rules pertaining to the preparation of detailed prospectuses and the subsequent sales of previously issued securities.

When a Prospectus Is Required

Unless an exemption has been granted, all provincial securities acts require that a prospectus be filed and delivered if the offering or sale of securities is deemed to be a *distribution* to the public. In simplified terms, a prospectus is the investment contract between the investor and the corporation that is offering its securities for sale. It is designed to provide full, true, and plain disclosure regarding the **material facts** about the security in question. On this basis, investors considering purchasing the security are able to evaluate it and make an informed decision.

The prospectus requirement generally applies to three types of trades in securities:

- Trades by or on behalf of an issuer (e.g., a new issue from treasury)
- Except in Quebec, trades from a control position, unless the trade is made under a prospectus exemption
- Trades in securities previously acquired by way of a prospectus exemption, unless the subsequent trade is made under a further prospectus exemption

New Issues

When a company raises equity capital in the marketplace, it issues securities from its own treasury. These issues are new securities, as compared to those being already publicly traded in what is known as the secondary market. New securities are issued from the company and then sold to the public. The proceeds are received by the company that issues the securities. If the company is issuing securities for the first time, it is considered an IPO, and a prospectus must first be filed with the regulators.

Newly issued securities are often referred to as *new issues*. However, a new issue isn’t necessarily an IPO; it may be an additional raising of capital from a reporting issuer (an already public company). A prospectus is normally still required in such cases, unless a prospectus exemption is available. The prospectus of a reporting issuer may be less detailed than the one associated with an IPO because information about the reporting issuer is already available to the public.

Preliminary Prospectus

Most provinces require the filing of both a **preliminary prospectus** (also called a **red herring prospectus**) and a **final prospectus**. The preliminary prospectus must have on its front cover, in red ink, a statement to the effect that the prospectus has been filed, is not in final form, and is subject to completion or amendment. This prominent warning states that the securities cannot be sold, and offers to buy cannot be accepted, until a receipt for the final prospectus has been obtained from the provincial securities commission that leads the review of the prospectus. That regulator is typically the securities commission located in the principal jurisdiction or head office of the issuing company.

All provinces other than Quebec require a preliminary prospectus to be filed; in Quebec a preliminary prospectus *may* be filed. When an offering is made in more than one province, or where it is intended to solicit expressions of interest, a preliminary prospectus is to be filed. One purpose of the preliminary prospectus is to allow the distributor of a new issue to determine the extent of public interest in the issue while it is being reviewed by the securities commission acting as principal regulator and prior to its actual pricing and distribution.

The form and content of the preliminary prospectus must comply substantially with the requirements of provincial securities legislation, which are now essentially harmonized in many respects. It must cover the form and content of a final prospectus, but may exclude information on the price paid to the underwriter and the price at which the securities will be offered to investors. The auditor’s report may also be excluded from the preliminary prospectus.

The dealers may also prepare an information circular, for in-house use only, called a **greensheet**. The greensheet highlights the salient features of the new issue, both pro and con, to help sales representatives solicit interest from the general public.

Passport System

All jurisdictions of the Canadian Securities Administrators, except Ontario, adopted Multilateral Instrument (MI) 11-102 *Passport System*. MI 11-102 gives issuers streamlined access to the capital markets in multiple jurisdictions. Under this system, the issuer files a prospectus in its principal jurisdiction with its principal regulator, thus meeting the requirements of one set of harmonized laws. The principal regulator issues a receipt, and the issuer gives notice to the local jurisdictions in which it otherwise would also have filed the prospectus. Upon receiving notice, the other jurisdictions automatically issue a deemed receipt.

The Passport System can be used only in specified jurisdictions, including British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, and Nova Scotia. Approval automatically applies in all other passport provinces and territories.

Even though Ontario did not adopt MI 11-102, the province is still considered a principal regulator under the instrument. This status gives issuers in Ontario access to the capital markets in other passport jurisdictions by dealing only with the Ontario Securities Commission for purposes of filing a prospectus or applying for a deemed exemption. The underwriter, agent, or company distributing securities to the public must maintain a record of all persons and companies to whom a preliminary prospectus has been sent. A revised prospectus must be provided if the preliminary prospectus is determined by the securities commission to be defective, or if an amendment or change is made. The revised preliminary prospectus (or the final prospectus) must be sent as soon as it is available to each recipient of the first preliminary prospectus.

Permitted Activities During the Waiting Period

The period between the issuance of a receipt for a preliminary prospectus and receipt for a final prospectus is called the **waiting period**. During this period, the underwriters may solicit expressions of interest from potential purchasers of the security. A copy of the preliminary prospectus must be provided to anyone who expresses interest, whether solicited or unsolicited.

Activities that are considered to be encouraging a trade are prohibited (e.g., the execution of an agreement to purchase the security in question). However, advertising the proposed issue to inform the public that the preliminary prospectus is available can be done during the waiting period. Other permitted information includes the price (if determined) and the name and address of the dealer member or registrant from whom the security may be purchased. No other material may be distributed to interested investors during the waiting period.

Final Prospectus

A final prospectus must contain complete details of the securities being offered for sale. In other words, it must provide the required full, true, and plain disclosure of all material facts relating to the securities to be distributed. It is in this context that an investor evaluating the potential purchase of securities assesses whether he or she wishes to complete the transaction. This decision is based solely on the information contained in the prospectus.

Any information that can significantly affect the market price or value of the securities is considered a material fact. This includes the offering price to the public, the proceeds to the issuer or selling security holders (or both), the underwriting discount, and any other required information that may have been omitted in the preliminary prospectus. As evidence of compliance with regulatory requirements, the final prospectus must be accompanied by the written consent of experts whose reports or opinions are referred to in the prospectus and other documents. Such experts might include appraisers, auditors, and lawyers.

The regulators review the documents carefully and may require changes before final approval. Once approval of the final prospectus is granted, the issue is then said to be **blue skyed** and may be distributed to the investing public.

A copy of the final prospectus must be mailed or otherwise delivered to all purchasers of securities offered in a distribution. Delivery must be made to the purchaser, or the purchaser's agent, by no later than midnight on the second business day after entering into an agreement of purchase and sale. Therefore, maintaining a list of recipients of the preliminary prospectus will ensure that the purchaser's final decision is based on the final, not preliminary, prospectus.

Some important final prospectus details are described below. These items must be presented in narrative or tabular form to ensure that they are useful to prospective investors. It is crucial that purchasers make informed decision based on the material presented.

Details of an Offering

The prospectus for an offering of securities contains the information described below.

Cover page disclosure

The cover page includes relevant information for investors such as the value of the offering, how stakeholders will be paid, market out clauses, and whether the prospectus is preliminary or final.

Summary

The summary highlights information likely to influence the investor's decision to purchase the securities, which appears elsewhere in the prospectus.

Information relating to the issuer

Issuer information includes the issuer's name and business, selected financial information, capital structure, recent facts, and trends that could have a material impact on the business.

Information relating to the securities

Securities information includes the types of product, use of proceeds, distribution method and eligibility of investment, as well as a description of the securities.

Information relating to the officers and shareholders

Officers and shareholders information includes the names and addresses of directors and officers with five-year histories of principal occupations and shares owned. It also includes the following specific information:

- Disclosure of specified information with respect to executive compensation and indebtedness of directors and senior officers to the issuer or its subsidiaries
- Information regarding any bankruptcies, cease-trade orders, or securities regulatory violations
- Details of any outstanding options, rights, or warrants to purchase securities of the issuer, of shares held in escrow
- Details of any prior sales of the securities being offered

Information relating to the parties involved

The prospectus also contains a number of representations, declarations, and certificates from the parties who are involved in the issuance of a security. These documents include the following two certificates:

- A certificate stating that the information in the prospectus constitutes full, true, and plain disclosure of all material facts relating to the securities offered, signed by the issuer's chief executive officer, the chief financial officer, two board directors, and any promoters

- A certificate stating that the information in the prospectus constitutes full, true, and plain disclosure of all material facts relating to the securities offered by the prospectus, signed by the underwriters and made to the best of their knowledge, information, and belief

Market Out Clauses

A **market out clause** permits the underwriter to cancel an offering without penalty under certain conditions. For example, one condition might be the issue becoming unsaleable due to changes in market conditions or the affairs of the issuer. The underwriter must fully disclose whether any or all market out clauses might result in the cancelling or cessation of an offering. A reference to the conditional aspects of the underwriting is required on the cover page of the prospectus, along with a cross reference to the location of further details under the *Plan for Distribution* in the prospectus.

The Short Form Prospectus System

All Canadian provinces have adopted compatible legislation, policies, and practices that allow certain securities issuers quicker access to capital markets by using a **short form prospectus**. This system shortens and streamlines the procedures for qualified issuers to access Canadian securities markets through prospectus offerings. The short form prospectus may be used by certain issuers on the basis that much of the information in the long form prospectus is already available and widely distributed elsewhere.

A short form prospectus omits information that can be found in the issuer’s annual information form (AIF) and other **continuous disclosure** documents. Accordingly, the short form prospectus focuses on matters relating primarily to the securities being distributed, such as price, distribution spread, use of proceeds, and the securities’ attributes.

An issuer is permitted to use a short form prospectus under the following conditions:

- It electronically files using the System for Electronic Document Analysis and Retrieval (SEDAR).
- It is a reporting issuer in at least one Canadian jurisdiction (and relies on the Passport System, if it files in other jurisdictions).
- It has filed current annual financial statements and a current AIF in at least one Canadian jurisdiction in which it is a reporting issuer.
- It is not an issuer whose operations are ceased or whose principal asset is cash, cash equivalents, or exchange listing.
- It has equity securities listed and posted for trading or quoted on a short form eligible exchange.

A long form prospectus is always required for certain offerings, including an IPO, an offering by an inactive or dormant issuer, and an offering for the purpose of financing a material change in the issuer’s business.

After-Market Stabilization

After an issue is brought to market, one of the duties of the lead dealer may be to provide **after-market stabilization** of that security’s offering. Under this arrangement, the dealer is required to support the offer price of the stock once it begins trading in the secondary market (also called the *after-market*). Typically, the issuing company and the dealer negotiate the terms of any after-market stabilization as part of the underwriting contract. The dealer's role is stated on the front page of the prospectus, and additional information must be provided inside the prospectus.

The three types of after-market stabilization activities are described below:

Greenshoe option (or over-allotment option)

The Greenshoe option (or over-allotment option) allows the dealer to issue 15% more shares than originally planned. If demand is high, the dealer exercises this option, allowing the dealer to leave additional shares in the market. In effect, the issuer raises more capital. If demand is low, and the price of the stock drops, the dealer buys back the additional shares to cancel them, and the purchase of the shares puts upward pressure on the stock price.

Penalty bid

The lead underwriter penalizes other dealers if their customers flip shares in weak issues. Flipping means selling the shares during, or shortly after, the distribution period. Penalties may include paying back commissions to the underwriter or reducing the number of shares that the investment advisor can receive in future IPOs.

Stabilizing bid

The dealer posts a bid to purchase shares at a price not exceeding the offer price if the distribution of shares is not complete.

Securities Distributions through the Exchanges

A different form of prospectus, or similar document, may be used when shares are distributed through the facilities of the TSX Venture Exchange. Rather than a provincial securities commission, the exchange reviews the prospectus and approves or disapproves it. The prospectus must meet all requirements of both the exchange and applicable national instruments.

This prospectus exemption can be used by issuers who meet the following requirements:

- The issuer has filed an AIF, is a reporting issuer, and is a SEDAR filer.
- The securities are listed securities or units of securities and warrants.
- The issuer has filed with the TSX Venture Exchange an exchange offering document, which incorporates by reference the AIF, the most recent financial statements, and material change reports. (This document must be delivered to purchasers.)
- The number of securities offered does not exceed the number previously outstanding.
- The gross proceeds do not exceed $2 million.
- No more than 20% of the offering goes to one purchaser.

Dive Deeper

For more information on this topic, consult the TSX Corporate Finance Manual—Policy 4.6 Public Offering by Short Form Offering Document; see also Part 5 of National Instrument 45-106.

Other Methods of Distributing Securities to the Public

4 | Identify other methods of distributing securities to the public through stock exchanges.

Although we have discussed in detail the most common methods that corporations use to bring securities to market, securities can also be distributed to the public by the following means:

- As junior company distributions
- As options of treasury shares and **escrowed shares**
- Through a **Capital Pool Company** (CPC)
- The **NEX** board
- Through **Crowdfunding**

Junior Company Distributions

A listed junior company may decide that it must raise new capital through a distribution of treasury shares to the public. The company must find a dealer member to act either as its underwriter or agent for the offering. Historically, listed junior mining and oil companies have raised millions of dollars through such distributions.

These types of companies usually have no record of earnings and few assets that would qualify as collateral for conventional credit sources such as bank loans, mortgage or funded debt, or government assistance. The funds these companies need is known as *risk capital* because it is usually earmarked for exploration and development with a high risk of failure.

Options of Treasury Shares and Escrowed Shares

A company may decide to offer an incentive to an underwriter to provide risk capital as a principal, rather than having the underwriter merely act as agent for the offering. A junior company (primarily, a non-dividend-paying company) can grant the underwriter specified treasury share options.

This technique involves the use of escrowed shares that serve as payment for properties, goods, or services. Escrowed shares are shares held by an independent trustee in trust for its owner. The escrowed shares cannot be sold or transferred, unless special approval is given. The shares can be released from escrow only with the permission of the appropriate authorities, such as a stock exchange or securities administrator.

Escrowing shares ties the value of the shares held by these shareholders to what happens to the property used to obtain these shares. It also prevents the owners of the shares from selling them before a proper market can develop. This restriction ensures some stability in the secondary market performance of the new issue after the completed offering. Escrowed shares maintain full voting and dividend privileges for these companies.

Capital Pool Company Program

For small, emerging private companies, the costs associated with going public through a traditional IPO is not always financially viable. Accordingly, the TSX Venture Exchange, home to many emerging Canadian businesses, developed the CPC program. The CPC program is a vehicle for emerging businesses to obtain financing earlier in their development than might otherwise be possible with a regular IPO.

A CPC describes a newly created company with no assets other than cash and with no established business or operations. A CPC can conduct an IPO and list the shares on the TSX Venture Exchange. The CPC's goal is to buy an existing business or assets, called *significant assets*, through a **qualifying transaction** (QT).

The CPC program involves a two-stage process:

- In the first stage, a CPC prospectus is filed and cleared, the IPO is completed, and the CPC's common shares are listed on the TSX Venture Exchange. Under this program, the issuer must raise between $200,000 and $4,750,000 from the IPO.
- The second stage involves the following steps:
    1. Within 24 months, the CPC identifies an appropriate business and issues a news release to announce the agreement to acquire the business.
    2. The CPC prepares a filing statement or information circular providing prospectus-level information on the business to be acquired.
    3. The TSX Venture Exchange reviews the disclosure document and evaluates the business to see that it meets initial listing requirements.

Shareholder approval is typically not required to close a QT.

The NEX Board

NEX is a separate board of the TSX Venture Exchange that provides a trading forum for companies that have fallen below the TSX Venture Exchange's listing standards. Companies that have low levels of business activity, or who do not carry on active business at all, can trade on the NEX board.

NEX provides a trading forum for the following types of issuers:

- Issuers that have been listed on the TSX Venture Exchange but no longer meet the TSX Venture Exchange Maintenance Requirements (currently known as Inactive Issuers)
- CPCs that have failed to complete a QT in accordance with the requirements of the exchange
- TSX issuers that no longer meet continued listing requirements, and would have been eligible for listing on TSX Venture as Inactive Issuers under existing policies

Crowdfunding

Crowdfunding is the process of raising start-up capital by soliciting contributions from the public at large, usually aided by online or Internet-based systems. This process is a new variation from the traditional approach that seeks funds from a limited pool of banks or venture capital firms.

In a number of jurisdictions, the participating regulators have adopted harmonized registration and prospectus exemptions that allow start-ups and early stage companies to use crowdfunding to raise capital.

The Listing Process

5 | Describe the advantages and disadvantages of listing shares.

6 | Describe the circumstances under which exchanges can withdraw trading privileges.

When a company wants to be listed on a recognized exchange, it must apply and be accepted for trading. The application form is a lengthy questionnaire designed to obtain detailed information about the company and its operations.

When the listing application is completed, and supporting documents are assembled, the company signs a formal **listing agreement**. The agreement details the specific regulations and reporting requirements that the company must follow to keep its listing in good standing.

By signing a listing agreement, a company agrees to comply with the following specific regulations:

- Submit annual and interim financial reports, as well as other corporate reports, to the exchange.
- Promptly notify the exchange about dividends or other distributions, proposed employee stock options, and sale or issue of treasury shares.
- Notify the exchange of other proposed material changes in the company's business or affairs.

After approval is given, a specific date is set for applicable securities to be called for trading on an exchange. There are formal announcements to members and public announcements in the financial press.

Advantages and Disadvantages of Listing

When applying for a listing, a public company considers the advantages and disadvantages of being listed on a major exchange, both to the company itself and to its shareholders, as shown in Table 12.2.

Table 12.2 | Advantages and Disadvantages of Listing

Advantages	Disadvantages
• **Prestige and goodwill** Company prestige is enhanced through increased public visibility. Shareholder goodwill increases as buying and selling becomes easier and market performance becomes more visible.	• **Additional controls on management** After listing, certain restrictions are put in place regarding stock options (those issued for internal use only), reporting of dividends, issue of shares for assets, and other matters.
• **Establish a market value** The market value of a listed company is readily visible. The financial markets are more likely to follow a listed company and this can attract new shareholders, enhance marketability in the secondary market, and increase the market for new issues by the company.	• **Need to keep market participants informed** A listed company's management must devote considerable time to meetings with security analysts and institutional investors, and to communicate with the press to explain company developments.
• **Excellent market visibility** The daily financial press carries full details of listed trading on a daily and weekly basis.	• **Market indifference** Low trading volume and poor market performance of a listed company become a matter of public record.
• **More information available** Because of strict exchange disclosure regulations, investors have access to more information on a regular basis.	• **Additional disclosure** Listing imposes additional disclosure requirements on the company that consume management time. Specifically, management is required to make continuous and prompt disclosure of material changes related to the company.

- **Simplified valuation for tax purposes**
  Valuation of securities for estate tax purposes and estate tax planning is easier.
- **Additional costs to the company**
  Various fees, including a listing fee and sustaining fee, must be paid to the exchange when a class of shares is listed.

Withdrawing Trading Privileges

As a protection to investors, the exchange is empowered to withdraw a listed security's trading and listing privileges, both temporarily and permanently. Serious action such as **delisting** rarely occurs. However, other actions related to protecting investors can occur more frequently. These actions may be implemented either by the exchange or at the request of the company itself, in regard to the company's own securities.

TEMPORARY INTERRUPTION OF TRADING

The three types of temporary withdrawals of trading privileges that an exchange can invoke are described below.

Delayed opening
Before the opening of trading, an exchange can order trading in a security to be delayed. The need for this action might arise if a heavy influx of buy or sell orders for a particular security materialize. The delay gives exchange traders time to organize the orders and to align buys with sells, to allow fair and orderly trading when the delay order is removed. A **delayed opening** in one security does not affect trading in other listed securities.

Halt in trading
A temporary **halt in trading** of a security can be ordered or arranged at any time to allow the reporting and communication of significant news, such as a pending merger or a substantial change in dividends or earnings.

Suspension in trading
Trading privileges can be suspended for more than one trading session. Such **suspensions in trading** are imposed for various reasons. For example, the company's financial condition may not meet the exchange's requirements for continued trading, or the company fails to comply with the terms of its listing agreement. If the company rectifies the problem to the exchange's satisfaction within the time required by the exchange, trading in the suspended security resumes. During the suspension, members are usually allowed to execute orders for the suspended security in the unlisted market, except for those securities suspended from trading on the TSX Venture Exchange.

CANCELLING A LISTING (DELISTING)

A listed security can be cancelled, which means that the security is delisted. Delisting can be done by the exchange or at the request of the company itself. Delisting is a permanent cancellation of listing privileges. A security might be delisted for any of the following reasons:

- The delisted security no longer exists because it was called for redemption (in the case of a preferred share) or was substituted for another security as a result of a merger.
- The company is without assets or has gone bankrupt.
- The public distribution of the security has dwindled to an unacceptably low level.
- The company has failed to comply with the terms of its listing agreement.

Listing Shares for Trading

Can you identify the various methods of distributing securities and explain how shares are listed on an exchange? *Complete the online learning activity to assess your knowledge*.

KEY TERMS & DEFINITIONS

Can you read some definitions and identify the key terms from this chapter that match? *Complete the online learning activity to assess your knowledge.*

Summary

In this chapter, we discussed the following key aspects regarding the financing and listing of securities in the capital markets:

- Federal government financing is usually accomplished through an auction, but new issues of provincial direct and guaranteed bonds are usually sold at a negotiated price through a fiscal agent.
- Corporations issue common or preferred shares to raise capital, which creates the company's capital stock. They may also raise capital by issuing bond, debentures, and other debt securities. They can also raise capital by borrowing from lending institutions. Securities legislation requires that a prospectus be filed and delivered if the offering or sale of securities is deemed to be a distribution to the public.
- The Passport System gives issuers streamlined access to the capital markets in multiple jurisdictions, which simplifies the regulatory approval process.
- An issuer is permitted to use a short form prospectus containing limited information only under certain conditions. For example, the issuer must file electronically using SEDAR and must be a reporting issuer in at least one Canadian jurisdiction.
- The requirement for continuous disclosure applies to reporting issuers and those who have issued securities under a prospectus. It also applies to a securities exchange offering or securities listed on a stock exchange.
- After securities have been issued, the lead dealer may be required to provide after-market stabilization by establishing a short position, by penalizing dealers that sell securities shortly after issue, or by creating an open bid to buy securities at the offer price.
- Advantages of listing shares for trading on an exchange include prestige and goodwill, establishment of market value, increased market visibility, wider distribution of company information, easier valuation for tax purposes, and increased investor following. Disadvantages include additional controls on management, additional costs, visibility of any market indifference, requirement for additional disclosure, and the requirement to provide information to a range of individuals and organizations on a regular basis.

Review Questions

Now that you have completed this chapter, you should be ready to answer the Chapter 12 Review Questions.

Frequently Asked Questions

If you have any questions about this chapter, you may find answers in the online Chapter 12 FAQs.

Summary for Volume 1

Congratulations on completing Volume 1 of the CSC!

A significant accomplishment given the amount of material, practice questions, learning activities, note taking, etc. you have done to help understand the course materials. As we noted in the introduction to the course, the CSC gives you the building blocks that cover a wide range of topics.

Volume 1 Focus

Our main focus in Volume 1 was understanding the different financial markets and financial instruments that help to facilitate the transfer of capital from savers and users through the various financial intermediaries.

A quick recap:

- You learned about the important role played by financial intermediaries. Without banks, investment dealers, credit unions, caisse populaires, etc., the transfer of capital from savers to users would not work as smoothly as it currently does.
- You learned about the various financial markets so that you understand where the different types of financial instruments trade. You should now have a solid idea of where stocks, bonds, and derivatives trade and also the difference between auction and dealer markets.
- You learned about the many different types of financial instruments, their features, and benefits, and risks. In Volume 2, you will use this knowledge as it applies to more advanced financial products, such as mutual funds, exchange-traded funds, and other managed and structured products.

Before Moving On

Now that you have completed Volume 1 of the course, are you able to answer the following?

- What role does investment capital play in facilitating the transfer of capital?
- How do auction and dealer markets differ?
- What roles do IIROC, the CDIC, OSFI, and the SROs play in the industry?
- Can you describe the Client Focused Reforms?
- Which phase of the business cycle is characterized by an increase in business failures and falling employment?
- What are some of the key determinants of the exchange rate?
- How does the Bank of Canada implement its inflation control policy?
- What is an overnight reverse repo and when is it used?
- What are the key features of callable, extendible and convertible bonds?

- How do sinking funds and purchase funds differ?
- How would you characterize a bond issued in the U.S. in U.S. dollars by a Swiss company?
- If you are given the years to maturity, the current market interest rate, and the current price of a bond, can you calculate the bond's yield to maturity?
- If a bond has a present value of $952, what does that tell you about the bond?
- What is the relationship between bond prices and interest rates?
- Does a stock split affect the dollar value of a company's equity?
- What does a cumulative feature on a preferred share mean?
- How does a margin account differ from a cash account?
- What is the main risk of taking a short position on a stock?
- How is a good til cancelled order executed?
- Can you list three differences between exchange-traded and OTC derivatives?
- When is a call option in-the-money? When is a put option out-of-the-money?
- How does an investor carry out a covered call strategy?
- How does a primary offering differ from a secondary offering?
- Can you describe one feature of an over-allotment option?
- What is the balancing equation for the statement of financial position?
- What is the link between the statement of changes in equity and comprehensive income and financial position?

This list is far from exhaustive—a random selection of topics and concepts. However, it should give you a good idea of where your strengths and weaknesses are and may alert you to additional review before attempting the exam and moving onto Volume 2.

We also encourage a thorough review of the glossary for the key terms you have come across in this first volume when preparing for the exam.

Glossary

absolute risk

The total variability or volatility of returns, incorporating all sources of risk embedded in returns, including first-order risks and second-order risks. Absolute risk does not distinguish between upside and downside volatility.

accredited investor

An individual or institutional investor who meets certain minimum requirement relating to income, net worth, or investment knowledge.

accredited investor exemption

An exemption that allows an accredited investor to purchase securities without receiving a prospectus.

accrued interest

Interest accumulated on a bond or debenture since the last interest payment date.

active ETF

ETF where the portfolio manager takes an active role in investment selection.

active investment strategy

The investor or manager employs active management with the aim of outperforming a benchmark portfolio or index on a risk-adjusted basis through active securities selection.

active management

Investment management that takes an active, as opposed to a passive, role when managing investments. Active fund managers make investment decisions based on their outlook for the markets and securities in which they invest. In almost all cases, active fund managers intend to outperform the return on a specific benchmark index.

adjusted cost base

The deemed cost of an asset representing the sum of the amount originally paid plus any additional costs, such as brokerage fees and commissions.

after-acquired clause

A protective clause found in a **bond's indenture** or **contract** that binds the **bond** issuer to pledging all subsequently purchased assets as part of the collateral for a bond issue.

after-market stabilization

A type of arrangement where the dealer supports the offer price of a newly issued stock once it begins trading in the secondary market.

agency traders

Manage trades for institutional clients. They do not trade the dealer member's capital, and they trade only when acting on behalf of clients. Agency traders do not merely take orders; they must manage institutional orders with minimal market impact and act as the client's eyes and ears for relevant market intelligence.

agent

An investment dealer operates as an agent when it acts on behalf of a buyer or a seller of a security and does not itself own title to the securities at any time during the transactions. See also **Principal**.

algorithmic trading

The use of sophisticated mathematical algorithms to execute equity trades over electronic trading systems.

allocation

The administrative procedure by which income generated by the **segregated fund's** investment portfolio is flowed through to the individual contract holders of the fund.

alpha

A statistical measure of the value a fund manager adds to the performance of the fund managed. If alpha is positive, the manager has added value to the portfolio. If the alpha is negative, the manager has underperformed the market.

alternative asset

Alternative assets refer to real assets held directly or indirectly by an investor. Real assets include commodities, real estate, and collectibles.

alternative investment

Asset class that is different from the traditional three board asset classes of equities, bonds, and cash. Generally categorized for portfolio management analysis into three groups: alternative strategy funds, alternative assets and private equity.

alternative mutual fund

A type of mutual fund that is permitted greater usage of derivatives, leverage, short selling and investments in illiquid assets than conventional mutual funds, but not the extent of hedge funds. Also known as liquid alternatives or liquid alts.

alternative trading systems (ATS)

Privately-owned computerized networks that match orders for securities outside of recognized exchange facilities. Also referred to as Proprietary Electronic Trading Systems (PETS).

american-style option

An option that can be exercised at any time during the option's lifetime. See also **European-Style Option**.

amortization

Gradually writing off the value of an **intangible asset** over a period of time. Commonly applied to items such as **goodwill**, improvements to leased premises, or expenses of a new stock or bond issue. See also **Depreciation**.

analyst

An expert in respect to a specific company or sector. Analysts provide other front office staff with ongoing analytical coverage in their area of specialty.

annual information form (AIF)

A document in which an issuer is required to disclose information about presently known trends, commitments, events or uncertainties that are reasonably expected to have a material impact on the issuer's business, financial condition or results of operations. Although investors are typically not provided with the AIF, the prospectus must state that it is available on request.

annual report

The formal financial statements and report on operations issued by a company to its shareholders after its fiscal year-end.

annuitant

Person on whose life the **maturity** and **death benefit** guarantees are based. It can be the contract holder or someone else designated by the contract holder. In registered plans, the **annuitant** and contract holder must be the same person.

annuity

A contract usually sold by life insurance companies that guarantees an income to the beneficiary or annuitant at some time in the future. The income stream can be very flexible. The original purchase price may be either a lump sum or a stream of payments. See **Deferred Annuity** and **Immediate Annuity**.

arbitrage

The simultaneous purchase of a security on one stock exchange and the sale of the same security on another exchange at prices which yield a profit to the arbitrageur.

arbitration

A method of dispute resolution in which an independent arbitrator is chosen to assist aggrieved parties recover damages.

arrears

Interest or dividends that were not paid when due but are still owed. For example, **dividends** owed but not paid to **cumulative preferred** shareholders accumulate in a separate account (arrears). When payments resume, dividends in arrears must be paid to the preferred shareholders before the **common** shareholders.

ask price

The lowest price a seller will accept for the financial instrument being quoted. See also **Bid**.

asset

Everything a company or a person owns or has owed to it. A statement of financial position category.

asset allocation

Apportioning investment funds among different categories of assets, such as cash, fixed income securities and equities. The allocation of assets is built around an investor's risk tolerance.

asset allocation fund

This type of fund has similar objectives to those of balanced funds, but they differ in that they typically do not have to hold a specified minimum percentage of the fund in any class of investment.

asset-backed commercial paper (ABCP)

A type of security that has a maturity date of less than one year, typically in the range of 90 to

180 days, with a legal and design structure of an asset-backed security.

asset-backed securities (ABS)

A short- to medium-term bond with equal claim on the principal and interest cash flows from a pool of underlying receivables.

asset coverage ratio

A financial ratio that shows a company's ability to cover its debt obligations with its assets after all non-debt liabilities have been satisfied.

asset mix

The percentage distribution of assets in a portfolio among the three major asset classes: cash and equivalents, fixed income and equities.

asset securitization

The process of aggregating financial assets and transforming them into marketable securities. Assets that are typically securitized include mortgages, loans, and corporate receivables.

assigned

Designated to fulfill the writer's obligation on a call or put option for an option buyer who decides to exercise the option.

Assuris

A not-for-profit company whose member firms are issuers of life-insurance contracts and whose mandate is to provide protection to contract holders against the insolvency of a member company.

at-the-money

An **option** with a strike price equal to (or almost equal to) the market price of the underlying security. See also **Out-of-the-money** and **In-the-money**.

attribution rules

A Canada Revenue Agency rule stating that an investor cannot avoid paying taxes at their marginal rate by transferring assets to other family members who have lower personal tax rates.

auction market

Market in which securities are bought and sold by brokers acting as **agents** for their clients, in contrast to a **dealer** market where trades are conducted **over-the-counter**. For example, the Toronto Stock Exchange is an auction market.

audit

A professional review and examination of a company's financial statements required under corporate law for the purpose of ensuring that the statements are fair, consistent and conform with **International Financial Reporting Standards (IFRS)**.

authorized shares

The maximum number of **common** (or **preferred**) shares that a corporation may issue under the terms of its charter.

Autorité des marchés financiers (Financial Services Authority) (AMF)

The body that administers the regulatory framework surrounding Québec's financial sector: securities sector, the distribution of financial products and services sector, the financial institutions sector and the compensation sector.

averages
A statistical tool used to measure the direction of the market. The most common average is the **Dow Jones Industrial Average**.

axe sheet
A list of products that a trader wishes to sell or buy as quickly as possible.

balanced budget
A budget is said to be balanced when revenue equals spending.

balanced fund
Invests in both stocks and bonds to provide a balanced mix of income and capital growth.

balance of payments
Canada’s interactions with the rest of the world which are captured here in the current account and capital account.

Bank of Canada
Canada’s central bank which exercises its influence on the economy by raising and lowering short-term interest rates.

Bank Rate
The minimum rate at which the Bank of Canada makes short-term advances to the chartered banks, other members of **Payments Canada** and investment dealers who trade in the money market.

bankers’ acceptance
A commercial draft (i.e., a written instruction to make payment) drawn by a borrower for payment on a specified date. A BA is guaranteed at maturity by the borrower’s bank. As with T-bills, BAs are sold at a discount and mature at their face value, with the difference representing the return to the investor. BAs may be sold before maturity at prevailing market rates, generally offering a higher yield than Canada T-bills.

banking group
A group of investment firms, each of which individually assumes financial responsibility for part of an **underwriting.**

bankrupt
The legal status of an individual or company that is unable to pay its creditors and whose **assets** are therefore administered for its creditors by a Trustee in Bankruptcy.

basis point
One-hundredth of a percentage point of bond yields. Thus, 1% represents 100 basis points.

bearer bonds
A security (usually a bond) which does not have the owner’s name recorded in the books of the issuing company nor on the security itself and which is payable to the holder, i.e., the holder is

the deemed owner of the security. See also **Registered Security**.

benchmark

A standard against which an investment or portfolio is measured. A common benchmark is the t-bill rate plus some sort of performance benchmark; for example, the T-bill rate plus 4%. A benchmark could also be a market index; for example, the S&P/TSX Composite Index.

beneficial owner

The real (underlying) owner of an account, securities or other assets. An investor may own shares which are registered in the name of an investment dealer, trustee or bank to facilitate transfer or to preserve anonymity, but the investor would be the beneficial owner.

beneficiary

The individual or individuals who have been designated to receive the **death benefit** as part of a segregated fund or designated to receive assets as part of a testator's will. Beneficiaries may be either revocable or irrevocable.

best efforts underwriting

The attempt by an investment dealer (underwriter) to sell an issue of securities, to the best of their abilities, but does not guarantee that any or all of the issue will be sold. The investment dealer is not held liable to fulfill the order or to sell all of the securities. The underwriter acts as an **agent** for the issuer in distributing the issue.

beta

A measure of the sensitivity (i.e., volatility) of a stock or a mutual fund to movements in the overall stock market. The beta for the market is considered to be 1. A fund that mirrors the market, such as an index fund, would also have a beta of 1. Funds or stocks with a beta greater than 1 are more volatile than the market and are therefore riskier. A beta less than 1 is not as volatile and can be expected to rise and fall by less than the overall market.

bid-ask spread

The difference between the current bid and ask, calculated as Ask - Bid.

bid price

The highest price a buyer is willing to pay for the financial instrument being quoted. See also **Ask**.

blue-chip

An active, leading, nationally known common stock with a record of continuous dividend payments and other strong investment qualities. The implication is that the company is of "good" investment value.

blue sky

A slang term for laws that various Canadian provinces and American states have enacted to protect the public against securities frauds. The term blue skyed is used to indicate that a new issue has been cleared by a securities commission and may be distributed.

bond

A certificate evidencing a **debt** on which the issuer promises to pay the holder a specified amount of interest based on the **coupon** rate, for a specified length of time, and to repay the loan on its maturity. Strictly speaking, assets are pledged as security for a bond issue, except in the case of government "bonds", but the term is often loosely used to describe any funded debt issue.

bond contract

The actual legal agreement between the issuer and the bondholder. The contract outlines the terms and conditions – the **coupon** rate, timing of coupon payments, **maturity** date and any other terms. The bond contract is usually administered by a trust company on behalf of all the bondholders. Also called a **Bond Indenture** or **Trust Deed**.

bond fund

A fund that invests primarily in bonds and derives its income mostly from interest payments made by bond issuers to the fund.

bond indenture

See **Bond Contract**.

bond residue

The remaining bond once the coupons have been stripped.

book value

The amount of net assets belonging to the owners of a business (or shareholders of a company) based on **statement of financial position** values. It represents the total value of the company's assets that shareholders would theoretically receive if a company were liquidated. Also represents the original cost of the units allocated to a **segregated fund** contract.

bottom-up analysis

An investment approach that seeks out undervalued companies. A fund manager may find companies whose low share prices are not justified. They would buy these securities and when the market finally realizes that they are undervalued, the share price rises giving the astute bottom-up manager a profit. See also **Top-Down Analysis**.

bought deal

A new issue of stocks or bonds bought from the issuer by an investment dealer for resale to its clients, usually by way of a **private placement** or short form prospectus. The dealer risks its own capital in the bought deal. In the event that the price has to be lowered to sell out the issue, the dealer absorbs the loss.

Bourse de Montréal

A stock exchange (also referred to as the Montréal Exchange) that deals exclusively with non-agricultural options and futures in Canada, including all options that previously traded on the **Toronto Stock Exchange** and all futures products that previously traded on the Toronto Futures Exchange.

broker

An investment dealer or a duly registered individual that is registered to trade in securities in the capacity of an agent or principal and is a member of a **Self-Regulatory Organization**.

broker of record

The broker named as the official advisor to a corporation on financial matters; has the right of first refusal on any new issues.

bucketing

Confirming a transaction where no trade has been executed.

budget deficit

Occurs when total spending by the government for the year is higher than revenue collected.

budget surplus
Occurs when government revenue for the year exceeds expenditures.

business cycle
The recurrence of periods of **expansion** and **recession** in economic activity. Each cycle is expected to move through five phases – the **trough, recovery, expansion, peak, contraction (recession)**. Given an understanding of the relationship between the business cycle and security prices an investor or fund manager would select an **asset mix** to maximize returns.

business risk
The risk inherent in a company's operations, reflected in the variability in earnings. A weakening in consumer interest or technological obsolescence usually causes the decline. Examples include manufacturers of vinyl records, eight track recording tapes and beta video machines.

business trust
Purchases the assets of an underlying company and the profits and losses resulting from the use of the trust are shared with investors on a proportional basis.

buy and hold
A passive investment approach where the investor or manager buys and holds a portfolio of securities for a long period of time.

buy-back
A company's purchase of its common shares either by tender or in the open market for cancellation, subsequent resale or for **dividend reinvestment plans**.

buy-ins
The obligation to buy back the stock after selling it short if adequate margin cannot be maintained by the client and/or if the originally borrowed stock is called by its owner and no other stock can be borrowed to replace it.

buy side
The term applied to retail and institutional investors, since they are the buyers of securities and services provided by the sell-side of the market.

call feature
A clause in a bond or preferred share agreement that allows the issuer the right to "call back" the securities prior to maturity. The company would usually do this if they could refinance the **debt** at a lower rate (similar to refinancing a mortgage at a lower rate). Calling back a security prior to maturity may involve the payment of a penalty known as a **call premium**.

call option
The right to buy a specific number of shares at a specified price (the **strike price**) by a fixed date. The buyer pays a **premium** to the seller of the call option contract. An investor would buy a call option if the underlying stock's price is expected to rise. See also **Put Option**.

call price
The price at which a bond or preferred share with a **call feature** is redeemed by the issuer. This is the amount the holder of the security would receive if the security was redeemed prior to maturity. The call price is equal to par (or a stated value for preferred shares) plus any **call**

premium. See also **Redemption Price**.

call protection period
For callable bonds, the period before the first possible call date.

callable bond
May be redeemed (called in) upon due notice by the security's issuer.

callable preferred
May be redeemed (called in) upon due notice by the security's issuer.

Canada Deposit Insurance Corporation (CDIC)
A federal Crown Corporation providing deposit insurance against loss (up to $100,000 per depositor) when a member institution fails.

Canada Education Savings Grant (CESG)
An incentive program for those investing in a **Registered Education Savings Plan (RESP)** whereby the federal government will make a matching grant of a maximum of $500 to $600 per year of the first $2,500 contributed each year to the RESP of a child under age 18.

Canada Pension Plan (CPP)
A mandatory contributory pension plan designed to provide monthly retirement, disability and survivor benefits for all Canadians. Employers and employees make equal contributions. Québec has its own parallel pension plan Québec Pension Plan (QPP).

Canada Premium Bonds (CPBs)
A secure savings product fully guaranteed by the Government of Canada. The government discontinued the sale of CPBs in November 2017 but will continue to guarantee and honour any existing issues until investors redeem them or the issues mature, whichever comes first.

Canada Savings Bonds (CSBs)
A secure savings product fully guaranteed by the Government of Canada. The government discontinued the sale of CSBs in November 2017 but will continue to guarantee and honour any existing issues until investors redeem them or the issues mature, whichever comes first.

Canadian Depositary Receipts™ (CDR)
Securities designed to give Canadians access to popular U.S. and global companies that trade on the NYSE and NASDAQ, but in Canadian dollars and listed on the Canadian NEO exchange.

Canadian Derivatives Clearing Corporation (CDCC)
The CDCC is a service organization that clears, issues, settles, and guarantees options, futures, and futures options traded on the Bourse de Montréal (the Bourse).

Canadian Investor Protection Fund (CIPF)
A fund that protects eligible customers in the event of the insolvency of an IIROC dealer member. It is sponsored solely by IIROC and funded by quarterly assessments on dealer members.

Canadian Life and Health Insurance Association Inc. (CLHIA)
The national trade group of the life insurance industry, which is actively involved in overseeing applications and setting industry standards.

Canadian Securities Administrators (CSA)

The CSA is a forum for the 13 securities regulators of Canada's provinces and territories to co-ordinate and harmonize the regulation of the Canadian capital markets.

Canadian Securities Exchange (CSE)

Launched in 2003 as an alternative marketplace for trading equity securities and emerging companies.

Canadian Unlisted Board Inc.

An Internet web-based system for investment dealers to report completed trades in unlisted and unquoted equity securities in Ontario.

CanDeal

Provides institutional investors with electronic access to federal bond bid and offer prices and yields from its six bank-owned dealers.

CanPx

A joint venture of several IIROC member firms and operates as an electronic trading system for fixed income securities providing investors with real-time bid and offer prices and hourly trade data.

capital

Has two distinct but related meanings. To an economist, it means machinery, factories and inventory required to produce other products. To an investor, it may mean the total of financial **assets** invested in securities, a home and other fixed assets, plus cash.

capital and financial account

Account which reflects the transactions occurring between Canada and foreign countries with respect to the acquisition of assets, such as land or currency. Along with the **current account** a component of the **balance of payments**.

capital gain

Selling a security for more than its purchase price. For non-registered securities, 50% of the gain would be added to income and taxed at the investor's marginal rate.

capital loss

Selling a security for less than its purchase price. Capital losses can only be applied against capital gains. Surplus losses can be carried forward indefinitely and used against future capital gains. Only 50% of the loss can be used to offset any taxable capital loss.

capital market

Financial markets where **debt** and **equity** securities trade. Capital markets include organized exchanges as well as private placement sources of debt and equity.

Capital Pool Company (CPC)

A company that is permitted to seek financing through an IPO prior to having any assets or commercial operation. The CPC uses the funds raised from the IPO to evaluate and acquire an existing business or significant assets in a qualifying transaction.

capital shares

One of the components of split shares. Capital shares receive the majority of capital gains from the underlying common shares.

capitalization or capital structure

Total dollar amount of all **debt**, **preferred** and **common** stock, and **retained earnings** of a company. Can also be expressed in percentage terms.

capitalizing

Recording an expenditure initially as an **asset** on the **statement of financial position** rather than as an expense on the **statement of comprehensive income**, and then writing it off or **amortizing** it (as an expense on the **statement of comprehensive income**) over a period of years. Examples include interest, and research and development.

carry forward

The amount of RRSP contributions that can be carried forward from previous years. For example, if a client was entitled to place $13,500 in an RRSP and only contributed $10,000, the difference of $3,500 would be the unused contribution room and can be carried forward indefinitely.

carrying charges

Deductible expenses for tax purposes.

cash account

A type of brokerage account where the investor is expected to have either cash in the account to cover their purchases or where an investor will deliver the required amount of cash before the settlement date of the purchase.

cash flow

A company's profit for a stated period plus any deductions that are not paid out in actual cash, such as **depreciation**. For an investor, any source of income from an investment including **dividends**, interest income, rental income, etc. Can also refer to money flowing into our out of an account or portfolio.

cash flow-to-total debt outstanding ratio

A financial **ratio** that gauges a company's ability to repay the funds it has borrowed. Short-term borrowings must normally be repaid or rolled over within a year.

cash-secured put write

Involves writing a **put option** and setting aside an amount of cash equal to the strike price. If the cash-secured put writer is assigned, the cash is used to buy the stock from the exercising put buyer.

CBID

An electronic trading system for fixed-income securities operating in the retail market.

CBID Institutional

An electronic trading system for fixed-income securities operating in the institutional market.

CDR ratio

The method used to increase or reduce the number of underlying shares of the CDR based on how the Canada/U.S. exchange rate changes.

CDS Clearing and Depository Services Inc. (CDS)

CDS provides customers with physical and electronic facilities to deposit and withdraw depository-eligible securities and manage their related ledger positions (securities accounts). CDS also provides electronic clearing services both domestically and internationally, allowing customers to report, confirm and settle securities trade transactions.

central bank

A body established by a national Government to regulate currency and **monetary policy** on a national/international level. In Canada, it is the Bank of Canada; in the United States, the Federal Reserve Board; in the U.K., the Bank of England.

chart analysis

The use of charts and patterns to forecast buy and sell decisions. See also **Technical Analysis**.

class A and B stock

Shares that have different classes sometimes have different rights. Some may have superior claims over other classes or may have different voting rights. Class A stock is often similar to a participating preferred share with a prior claim over Class B for a stated amount of dividends or assets or both, but without voting rights; the Class B may have voting rights but no priority as to dividends or assets. Note that these distinctions do not always apply.

clearing

The process of confirming and matching security trade details.

clearing corporations

A not-for-profit service organization owned by the exchanges and their members for the clearance, settlement and issuance of **options** and **futures**. A clearing corporation provides a guarantee for all options and futures contracts it clears, by becoming the buyer to every seller and the seller to every buyer.

Client Focused Reforms

Regulatory requirements that came into force in 2021, covering key industry requirements for the know your client rule, know your product rule, conflicts of interest, suitability and relationship disclosure.

closed-end discretionary funds

Funds that have the flexibility to buy back their outstanding shares periodically. Also known as interval funds.

closed-end fund

Shares in closed-end investment companies are readily transferable in the open market and are bought and sold like other shares. Capitalization is fixed. See also **Investment Company**.

closet indexing

A portfolio strategy whereby the fund manager does not replicate the market exactly but sticks fairly close to the market weightings by industry sector, country or region or by the average market capitalization.

coincident indicators

Statistical data that, on average, change at approximately the same time and in the same direction as the economy as a whole.

collateral trust bond

A bond secured by stocks or bonds of companies controlled by the issuing company, or other securities, which are deposited with a **trustee**.

commercial paper

An unsecured promissory note issued by a corporation or an asset-backed security backed by a pool of underlying financial assets. Issue terms range from less than three months to one year. Most corporate paper trades in $1,000 multiples, with a minimum initial investment of $25,000. Commercial paper may be bought and sold in a secondary market before maturity at prevailing market rates.

commission

The fee charged by a stockbroker for buying or selling securities as agent on behalf of a client.

commodity

A product used for commerce that is traded on an organized exchange. A commodity could be an agricultural product such as canola or wheat, or a natural resource such as oil or gold. A commodity can be the basis for a **futures** contract.

commodity ETF

Commodity ETFs are focused on commodity holdings or holdings that replicate or are related to commodities. Three different types of commodity ETFs include physical-based, futures-based, or equity-based ETFs.

commodity futures

Futures contracts based on an underlying commodity.

common shares

Securities representing ownership in a company. They carry voting privileges and are entitled to the receipt of dividends, if declared. Also called common stock.

competitive tender

A distribution method used in particular by the Bank of Canada in distributing new issues of government marketable bonds. Bids are requested from primary **distributors** and the higher bids are awarded the securities for distribution. See also **Non-Competitive Tender**.

compound interest

Interest earned on an investment at periodic intervals and added to the amount of the investment; future interest payments are then calculated and paid at the original rate but on the increased total of the investment. In simple terms, interest paid on interest.

confirmation

A printed acknowledgement giving details of a purchase or sale of a security which is normally mailed to a client by the broker or investment dealer within 24 hours of an order being executed. Also called a contract.

consolidated financial statements

A combination of the financial statements of a parent company and its subsidiaries, presenting the financial position of the group as a whole.

consolidation

See **Reverse Split**.

consumer finance company

Makes direct cash loans to consumers, who usually are unable to secure a loan from a bank. Consumer finance companies typically charge a higher interest rate than banks.

Consumer Price Index (CPI)
Price index which measures the cost of living by measuring the prices of a given basket of goods. The CPI is often used as an indicator of **inflation**.

continuation pattern
A chart formation indicating that the current trend will continue.

continuous public disclosure
The act of a public corporation complying with continuous disclosure requirements set out by the relevant provincial securities act.

contract holder
The owner of a **segregated fund** contract.

contraction
Represents a downturn in the economy and can lead to a recession if prolonged.

contrarian investors
Contrarian investors use sentiment indicators to determine what most investors expect prices to do in the future, so they can move in the opposite direction.

contribution in kind
Transferring securities into an **RRSP**. The general rules are that when an asset is transferred there is a **deemed disposition**. Any **capital gain** would be reported and taxes paid. Any **capital losses** that result cannot be claimed.

control position
Ownership of sufficient voting stock in a company to materially affect its affairs. In all provinces except Manitoba, New Brunswick and Quebec, a 20% holding is deemed to represent control.

conversion price
The dollar value at which a **convertible** bond or security can be converted into common stock.

conversion privilege
The right to exchange a bond for common shares on specifically determined terms.

convertible arbitrage strategy
A strategy that looks for mispricing between a convertible security and the underlying stock. A typical convertible arbitrage position is to be long the convertible bond and short the common stock of the same company.

convertible bond
A bond or debenture which may be exchanged by the owner, usually for the common stock of the same company, in accordance with the terms of the conversion privilege.

convexity
A measure of the rate of change in duration over changes in yields. Typically, a bond will rise in price more if the yield change is negative than it will fall in price if the yield change is positive.

core holdings
In the context of ETFs, core holdings are typically passive ETF investments intended to provide the majority of returns, as opposed to satellite holdings which are more focused on riskier sector

ETF holdings.

corporate note

An unsecured promise made by the borrower to pay interest and repay the principal at a specific date.

corporation or company

A form of business organization created under provincial or federal statutes which has a legal identity separate from its owners. The corporation's owners (shareholders) have no personal liability for its debts. See also **Limited Liability**.

correction

A price reversal that typically occurs when a security has been overbought or oversold in the market.

correlation

A measure of the relationship between two or more securities. If two securities mirror each other's movements perfectly, they are said to have a positive one (+1) correlation. Combining securities with high positive correlations does not reduce the risk of a portfolio. Combining securities that move in the exact opposite direction from each other are said to have perfect negative one (-1) correlation. Combining two securities with perfect negative correlation reduces risk. Very few, if any, securities have a perfect negative correlation. However, risk in a portfolio can be reduced if the combined securities have low positive correlations.

cost method

Used when a company owns less than 20% of a subsidiary.

cost of sales

A **statement of comprehensive income** account representing the cost of buying raw materials that go directly into producing finished goods.

cost-push inflation

A type of inflation that develops due to an increase in the costs of production. For example, an increase in the price of oil may contribute to higher input costs for a company and could lead to higher inflation.

coupon bond

A bond with coupons attached that represent the regular interest payments the issuer is obligated to pay.

coupon rate

The rate of interest that appears on the certificate of a **bond**. Multiplying the coupon rate times the **principal** tells the holder the dollar amount of interest to be paid by the issuer until **maturity**. For example, a bond with a **principal** of $1,000 and a coupon of 10% would pay $100 in interest each year. Coupon rates remain fixed throughout the term of the bond. See also **Yield**.

covenant

A pledge in a **bond indenture** indicating the fulfilment of a promise or agreement by the company issuing the debt. An example of a covenant may include the promise not to issue any more debt.

cover

Buying a security previously sold short. See also **Short Sale**.

covered call

A written call option where the writer owns the underlying stock, and uses this position to meet their obligations if assigned.

covered call ETF

ETFs that employ covered calls to enhance the yield and reduce the volatility of owning the underlying stock or portfolio.

coverage trader

Manages trades on behalf of institutional clients and does not trade the dealer member's capital. Also known as an agency trader.

covered writer

The writer of an option who also holds a position that is equivalent to, but on the opposite side of the market from the short option position. In some circumstances, the equivalent position may be in cash, a convertible security or the underlying security itself. See also **Naked Writer**.

creation unit

The block of ETF shares provided by an ETF issuer to the designated broker.

creditor protection

Segregated funds offer protection from creditors in the event of bankruptcy, because segregated funds are an insurance product, and the insurance proceeds generally fall outside the provisions of bankruptcy legislation.

crowdfunding

The process of raising start-up capital by soliciting contributions from the public at large, usually aided by online or Internet-based systems.

cum dividend

With **dividend**. If you buy shares quoted cum dividend, i.e., before the ex-dividend date, you will receive an upcoming already-declared dividend. If shares are quoted **ex-dividend** (without dividend) you are not entitled to the declared dividend.

cum rights

With rights. Buyers of shares quoted cum rights, i.e., before the **ex-rights date**, are entitled to forthcoming already-declared rights. If shares are quoted ex rights (without rights) the buyer is not entitled to receive the declared rights.

cumulative

A **preferred** stock having a provision that if one or more of its **dividends** are not paid, the unpaid dividends accumulate in **arrears** and must be paid before any dividends may be paid on the company's **common shares**.

current account

Account that reflects all payments between Canadians and foreigners for goods, services, interest and dividends. Along with the **capital and financial account** it is a component of the **balance of payments**.

current assets

Cash and assets which in the normal course of business would be converted into cash, usually within a year, e.g. accounts receivable, inventories. A **statement of financial position** category.

current liabilities

Money owed and due to be paid within a year, e.g. accounts payable. A **statement of financial position** category.

current ratio

A **liquidity ratio** that shows a company's ability to pay its current obligations from **current assets**. A current ratio of 2:1 is the generally accepted standard. Also known as the working capital ratio.

current yield

The annual income from an investment expressed as a percentage of the investment's current value. On stock, calculated by dividing yearly **dividend** by market price; on bonds, by dividing the **coupon** by market price. See also **Yield**.

custodian

A firm that holds the securities belonging to a **mutual fund** or a **segregated fund** for safekeeping. The custodian can be either the insurance company itself, or a qualified outside firm based in Canada.

cycle analysis

Used to forecast when the market will start moving in a particular direction and when it will ultimately reach its peak or trough. The theory of cycle analysis is based on the assumption that cyclical forces drive price movements in the marketplace.

cyclical industry

An industry that is particularly sensitive to swings in economic conditions. Cyclical industries tend to rise quickly when the economy does well and fall quickly when the economy contracts.

cyclical stock

A stock in an industry that is particularly sensitive to swings in economic conditions. Cyclical Stocks tend to rise quickly when the economy does well and fall quickly when the economy contracts. In this way, cyclicals move in conjunction with the **business cycle**. For example, during periods of **expansion** auto stocks do well as individuals replace their older vehicles. During **recessions**, auto sales and auto company share values decline.

cyclical unemployment

The amount of unemployment that rises when the economy softens, firms' demand for labour moderates, and some firms lay off workers in response to lower sales. It drops when the economy strengthens again.

daily valuation method

A method of calculating the NAVPS of a mutual fund. The incremental change in the value of a fund from day to day is expressed as an index from which the return can be calculated. This method of calculation is beneficial for mutual funds, which generally calculate NAVPS daily. It greatly simplifies their return calculation at the end of the month.

dark pool
An equity marketplace that does not offer pre-trade transparency on trader orders.

day order
A buy or sell order that automatically expires if it is not executed on the day it is entered. All orders are day orders unless otherwise specified.

dealer market
A market in which securities are bought and sold **over-the-counter** in which dealers acts as **principals** when buying and selling securities for clients. Also referred to as the **unlisted market**.

dealer member
A stock brokerage firm or investment dealer which is a member of a stock exchange or the **Investment Industry Regulatory Organization of Canada**.

death benefit
The amount that a segregated fund policy pays to the beneficiary or the estate when the market value of the segregated fund is lower than the guaranteed amount on the death of the **annuitant**.

debenture
A certificate of indebtedness of a government or company backed only by the general credit of the issuer and unsecured by mortgage or lien on any specific asset. In other words, no specific assets have been pledged as collateral.

debt
Money borrowed from lenders for a variety of purposes. The borrower typically pays interest for the use of the money and is obligated to repay it at a set date.

debt-to-equity ratio
A **ratio** that shows whether a company's borrowing is excessive. The higher the ratio, the higher the **financial risk**.

debt securities
A debt instrument such as a bond or debenture is an instrument that represents a liability on a loan and specifies basic terms such as the amount borrowed, the interest rate and maturity date. The issuer promises to repay the loan at maturity. The term of the loan varies depending on the type of instrument.

declining-balance method
An accounting method of depreciation whereby a fixed percentage is applied to the outstanding balance of an asset to determine the expense to be charged each period.

declining industry
An industry moving from the **maturity** stage. It tends to grow at rates slower than the overall economy, or the growth rate actually begins to decline.

deemed disposition
Under certain circumstances, taxation rules state that a transfer of property has occurred, even without a purchase or sale, e.g., there is a deemed disposition on death or emigration from Canada.

default

A **bond** is in default when the borrower has failed to live up to its obligations under the **trust deed** with regard to interest, **sinking fund** payments or has failed to redeem the bonds at maturity.

default risk

The risk that a debt security issuer will be unable to pay interest on the prescribed date or the **principal** at **maturity**. Default risk applies to debt securities not equities since equity **dividend** payments are not contractual.

defensive industry

An industry with a record of stable earnings and continuous **dividend** payments and which has demonstrated relative stability in poor economic conditions.

defensive stock

A stock of a company with a record of stable earnings and continuous **dividend** payments and which has demonstrated relative stability in poor economic conditions. For example, utility stock values do not usually change from periods of **expansion** to periods of **recession** since most individuals use a constant amount of electricity.

deferred annuity

This type of contract, usually sold by life insurance companies, pays a regular stream of income to the **beneficiary** or annuitant at some agreed-upon start date in the future. The original payment is usually a stream of payments made over time, ending prior to the beginning of the annuity payments. See also **Annuity**.

deferred tax liabilities

The income tax payable in future periods. These liabilities commonly result from temporary differences between the book value of assets and liabilities as reported on the statement of financial position and the amount attributed to that asset or liability for income tax purposes.

defined benefit plan

A type of registered pension plan in which the annual payout is based on a formula. The plan pays a specific dollar amount at retirement using a predetermined formula.

defined contribution plan

A type of registered pension plan where the amount contributed is known but the dollar amount of the pension to be received is unknown. Also known as a **money purchase plan**.

deflation

A sustained fall in prices where the consumer price index is negative.

delayed opening

Postponement in the opening of trading of a security the result of a heavy influx of buy and/or sell orders.

delisting

Removal of a security's listing on a **stock exchange**.

demand

The quantity demanded of a good or service based on a particular price during a given period. The lower the price, the higher the demand.

demand pull inflation
A type of inflation that develops when continued consumer demand pushes prices higher.

denominations
The face values of a bond.

depletion
Refers to consumption of natural resources that are part of a company's assets. Producing oil, mining and gas companies deal in products that cannot be replenished and as such are known as wasting assets. The recording of depletion is a bookkeeping entry similar to **depreciation** and does not involve the expenditure of cash.

depreciation
Systematic charges against earnings to write off the cost of an **asset** over its estimated useful life because of wear and tear through use, action of the elements, or obsolescence. It is a bookkeeping entry and does not involve the expenditure of cash.

derivative
A type of financial instrument whose value is based on the performance of an underlying financial asset, commodity, or other investment. Derivatives are available on interest rates, currency, stock indexes. For example, a **call option** on IBM is a derivative because the value of the call varies in relation to the performance of IBM stock. See also **Options**.

designated broker
A designated broker has a contractual agreement with an ETF company to aid in the creation and redemption of ETF units.

direct bonds
This term is used to describe bonds issued by governments that are firsthand obligations of the government itself. See also **Guaranteed Bonds**.

direct electronic access (DEA)
The process of some institutional clients directly accessing the exchanges electronically via their investment dealers rather than placing orders (usually verbally) with their investment dealer who would in turn execute the transaction.

directional strategies
A type of **hedge fund** that places a bet on the anticipated movements in the market prices of equities, fixed-income securities, foreign currencies and commodities.

director
Person elected by voting **common** shareholders at the annual meeting to direct company policies.

directors' circular
Information sent to shareholders by the **directors** of a company that are the target of a takeover bid. A recommendation to accept or reject the bid, and reasons for this recommendation, must be included.

disclosure
One of the principles of securities regulation in Canada. This principle entails full, true and plain disclosure of all material facts necessary to make reasoned investment decisions.

discount
The amount by which a **preferred** stock or **bond** sells below its **par value**.

discount brokers
Brokerage house that buys and sells securities for clients at a greater commission discount than full-service firms. Also known as self-directed brokers.

discount rate
In computing the value of a bond, the discount rate is the interest rate used in calculating the present value of future cash flows.

discouraged workers
Individuals that are available and willing to work but cannot find jobs and have not made specific efforts to find a job within the previous month.

discretionary account
A securities account where the client has given specific written authorization to a partner, director or qualified portfolio manager to select securities and execute trades for him. See also **Managed Account** and **Wrap Account**.

disinflation
A decline in the rate at which prices rise – i.e., a decrease in the rate of inflation. Prices are still rising, but at a slower rate.

distressed securities strategy
Invests in the equity or debt securities of companies that are in financial difficulty and face bankruptcy or reorganization; these generally sell at deep discounts, reflecting their issuers' weak credit quality.

diversification
Spreading investment risk by buying different types of securities in different companies in different kinds of businesses and/or locations.

dividend
An amount distributed out of a company's profits to its shareholders in proportion to the number of shares they hold. Over the years a **preferred** dividend will remain at a fixed annual amount. The amount of **common** dividends may fluctuate with the company's profits. A company is under no legal obligation to pay preferred or common dividends.

dividend discount model
The relationship between a stock's current price and the present value of all future dividend payments. It is used to determine the price at which a stock should be selling based on projected future dividend payments.

dividend fund
Invest in preferred shares as well as high-quality common shares, with a history of consistently paying dividends.

dividend payout ratio
A ratio that measures the amount or percentage of the company's profit that are paid out to shareholders in the form of dividends.

dividend record date

The date upon which a company determines which shareholders are entitled to the declared dividend.

dividend reinvestment plan

The automatic reinvestment of shareholder dividends in more shares of the company’s stock.

dividend tax credit

A procedure to encourage Canadians to invest in **preferred** and **common shares** of taxable, dividend-paying Canadian corporations. The taxpayer pays tax based on grossing up the dividend and obtains a credit against federal and provincial tax based on the grossed-up amount. The federal government may adjust the gross up rate and tax credit from year to year.

dividend yield

A value ratio that shows the annual dividend rate expressed as a percentage of the current market price of a stock. Dividend yield represents the investor’s percentage return on investment at its prevailing market price.

dollar cost averaging

Investing a fixed amount of dollars in a specific security at regular set intervals over a period of time, thereby reducing the average cost paid per unit.

domestic bonds

Bonds issued in the currency and country of the issuer. For example, a Canadian dollar-denominated bond, issued by a Canadian company, in the Canadian market would be considered a domestic bond.

Dow Jones Industrial Average (DJIA)

A price-weighted **average** that uses 30 actively traded **blue chip** companies as a measure of the direction of the New York Stock Exchange.

drawdown

A cash management open-market operation pursued by the Bank of Canada to influence interest rates. A drawdown refers to the transfer of deposits to the Bank of Canada from the direct clearers, effectively draining the supply of available cash balances. Drawdown also refers to peak-to-trough investment declines during a specific period, expressed as a percentage of the peak value. Individual drawdowns measure the percentage loss an investor would have realized if an investment was bought at its peak and subsequently sold at its lowest point.

due diligence report

When negotiations for a new issue of securities begin between a dealer and corporate issuer, the dealer normally prepares a due diligence report examining the financial structure of the company.

duration

A measure of bond price volatility. The approximate percentage change in the price or value of a bond or bond portfolio for a 1%-point change in interest rates. The higher the duration of a bond the greater its risk.

duty of care

The responsibility to conduct due diligence before providing advice or recommending products.

dynamic asset allocation

An **asset allocation** strategy that refers to the systematic rebalancing, either by time period or weight, of the securities in the portfolio, so that they match the long-term benchmark asset mix among the various asset classes.

early redemption fee

A fee that is typically charged by a mutual fund when the fund is redeemed within 90 days of the initial purchase.

earned income

Income that is designated by Canada Revenue Agency for **RRSP** calculations. Most types of revenues are included with the exception of any form of investment income and pension income.

earnings per common share

A financial ratio that shows the earnings available to each common share.

earnings per share (eps)

A **value ratio** that shows the portion of net income for a period attributable to a single **common share** of a company. For example, a company with $100 million in earnings and with 100 million common shareholders would report an EPS of $1 per share.

economic indicators

Statistics or data series that are used to analyze business conditions and current economic activity. See also **leading**, **lagging**, and **coincident indicators**.

economics

A social science that is concerned with an understanding of production, distribution, and consumption of goods and services.

economies of scale

An economic principle whereby the per unit cost of producing each unit of output falls as the volume of production increases. Typically, a company that achieves economies of scale lowers the average cost per unit through increased production since fixed costs are shared over an increased number of goods.

efficient frontier

The curve that reflects the most efficient portfolios for all levels of risk.

efficient market hypothesis

The theory that a stock’s price reflects all available information and reflects its true value.

election period

When an investor purchases an **extendible** or **retractable bond**, they have a time period in which to notify the company if they want to exercise the option.

emerging growth industries

Brand new industries in the early stages of growth. Often considered as speculative because they are introducing new products that may or may not be accepted and may face strong competition from other new entrants.

emerging markets alternative funds

Invest in equity and debt securities of companies in emerging markets by using derivatives, short selling, and other complex investment strategies. As some emerging markets do not allow short selling and do not have viable derivative markets, these funds may not be able to hedge. As a result, performance can be volatile.

environmental, social and governance (ESG)

Refers to the environmental, social and governance factors of an investment. There is growing evidence that incorporating ESG factors into investment decisions can reduce risk and improve returns.

equilibrium price

The price at which the quantity demanded equals the quantity supplied.

equipment trust certificate

A type of debt security that was historically used to finance "rolling stock" or railway boxcars. The cars were the collateral behind the issue and when the issue was paid down the cars reverted to the issuer. In recent times, equipment trusts are used as a method of financing containers for the offshore industry. A security, more common in the U.S. than in Canada.

equity

Ownership interest in a corporation's stock that represents a claim on its revenue and assets. See also **Stock**.

equity accounting method

An accounting method used to determine income derived from a company's investment in another company over which it exerts significant influence.

equity-based exchange-traded fund

Commodity ETF that invests in listed companies that are involved in exploration and development or in the processing or refining of a commodity.

equity fund

Funds in the equity category must invest a minimum of 90% of their non-cash assets in equity securities. The main investment objective of equity funds is long-term capital growth.

equity market-neutral strategy

Designed to exploit inefficiencies and opportunities in the equity market by creating simultaneously long and short matched equity portfolios of approximately the same size with a goal of having zero (or very low) beta (directional exposure).

equity securities

Evidence of a share of ownership stake in the company that issued the security.

equity value per common share

A financial ratio, also called *book value per common share*, measures the net asset coverage for each common share if all assets were sold and all liabilities were paid.

escrowed shares

Outstanding shares of a company which, while entitled to vote and receive **dividends**, may not be bought or sold unless special approval is obtained. Mining and oil companies commonly use this technique when **treasury shares** are issued for new properties. Shares can be released from escrow (i.e., freed to be bought and sold) only with the permission of applicable authorities such as a stock exchange and/or securities commission.

estate freeze

A method of minimizing tax liability by creating a structure where the growth of assets transfers directly to the owner's children or spouse.

estate planning

Planning for the orderly transfer of a client's assets from one generation to the next.

estate trustee

The person who settles the estate and distributes the assets according to the terms of a will. Estate trustees in Ontario are also generally known as executors.

ETF Facts

A summary disclosure document that ETFs are required to produce and file.

ethical decision-making

Decision-making based on the principles of trust, integrity, justice, fairness, honesty, responsibility, and reliability.

ethics

Defined as the rules or standards governing the behaviour of a particular group or profession, a set of moral principles or values, or the study of the general nature of morals and the moral choices made by individuals.

Eurobonds

Bonds that are issued and sold outside a domestic market and typically denominated in a currency other than that of the domestic market. For example, a **bond** denominated in Canadian dollars and issued in Germany would be classified as a Eurobond.

European-style option

An **option** that can only be exercised on a specified date – normally the business day prior to expiration.

event-driven strategies

A type of **hedge fund** that seeks to profit from unique events such as mergers, acquisitions, stock splits or buybacks.

ex-ante

A projection of expected returns – what investors expect to realize as a return.

exchange fund account

A special federal government account operated by the Bank of Canada to hold and conduct transactions in Canada's foreign exchange reserves on instructions from the Minister of Finance.

exchange rate

The price at which one currency exchanges for another.

exchange-traded funds (ETFs)

Open-end mutual fund trusts that hold the same stocks in the same proportion as those included in a specific stock index. Shares of an exchange-traded fund trade on major stock exchanges. Like index mutual funds, ETFs are designed to mimic the performance of a specified index by investing in the constituent companies included in that index. Like the stocks in which they invest, shares can be traded throughout the trading day.

exchange-traded fund wraps

A discretionary account where a single annual fee, based on the account's total assets, is charged. Often directed by a single portfolio manager, the managed account holds a basket of ETFs for security selection. The underlying ETFs tend to be passive in the investment management.

exchange-traded notes (ETNs)

Exchange-traded debt obligations issued by a bank that promises to pay investors a return on their investment based on the performance of a specific reference asset such as an index or another benchmark.

ex-dividend

A term that denotes that when a person purchases a **common** or **preferred share**, they are not entitled to the **dividend** payment. Shares go ex-dividend one business day prior to the shareholder record date. See also **Cum Dividend**.

ex-dividend date

The date that the shares start to trade ex-dividend. See **ex-dividend**.

executor

The person who settles the estate and distributes the assets according to the terms of a will. Executors in Ontario are also generally known as estate trustees.

exempt investor

Investors who meet certain qualifications that permit them to purchase securities without receiving a prospectus.

exempt list

Large professional buyers of securities, mostly financial institutions, that are offered a portion of a new issue by one member of the banking group on behalf of the whole syndicate. The term exempt indicates that this group of investors is exempt from receiving a **prospectus** on a new issue as they are considered to be sophisticated and knowledgeable.

exercise

The process of invoking the **rights** of the option or **warrant** contract. It is the holder of the option who exercises his or her rights. See also **Assignment**.

exercise price

The price at which a **derivative** can be exchanged for a share of the underlying security (also known as **subscription price**). For an **option**, it is the price at which the underlying security can be purchased, in the case of a **call**, or sold, in the case of a **put**, by the option holder. Synonymous with **strike price**.

expansion

A phase of the **business cycle** characterized by increasing corporate profits and hence increasing share prices, an increase in the demand for capital for business expansion, and hence an increase in interest rates.

expectations theory

A theory stating that the **yield curve** is shaped by a market consensus about future interest rates.

expiration date

The date on which certain rights or option contracts cease to exist. For equity options, this date is usually the Saturday following the third Friday of the month listed in the contract. This term can also be used to describe the day on which warrants and rights cease to exist.

ex-post

The **rate of return** that was actually received. This historic data is used to measure actual performance.

ex-rights

A term that denotes that the purchaser of a **common share** would not be entitled to a rights offering. Common shares go ex-rights two business days prior to the shareholder of **record date**.

extendible bond or debenture

A **bond** or **debenture** with terms granting the holder the option to extend the maturity date by a specified number of years.

extension date

For extendible bonds the maturity date of the bond can be extended so that the bond changes from a short-term bond to a long- term bond.

extra dividend

An extra payment made in addition to a regular dividend payment.

face value

The value of a bond or debenture that appears on the face of the certificate. Face value is ordinarily the amount the issuer will pay at maturity. Face value is no indication of market value.

F-class fund

A type of fee-based fund with a lower MER. To accommodate fee-based financial advisors, many mutual fund companies began offering F-class mutual funds. These funds reduce or eliminate the double charge.

fee-based accounts

A type of account that bundles various services into a fee based on the client’s assets under management, for example, 1% to 3% of client assets.

fiduciary responsibility

The responsibility of an investment advisor, mutual fund salesperson or financial planner to always put the client’s interests first. The fiduciary is in a position of trust and must act accordingly.

final good

A finished product, one that is purchased by the ultimate end user.

final prospectus

The prospectus which supersedes the **preliminary prospectus** and is accepted for filing by applicable provincial securities commissions. The final prospectus shows all required information pertinent to the new issue and a copy must be given to each first-time buyer of the new issue.

financial asset

A non-physical representational asset that derives a claim based on what it represents. For example, stocks, bonds and bank deposits are financial assets.

financial futures

Futures contracts with a financial asset as the underlying asset. Examples of underlying assets include currencies and stock indexes.

financial intermediary

An institution such as a bank, life insurance company, credit union or mutual fund which receives cash, which it invests, from suppliers of capital.

financial ratios

Financial calculations based on a company's financial statements, often providing clues about the company's financial health.

financial risk

The additional risk placed on the common shareholders from a company's decision to use debt to finance its operations.

financing

The purchase for resale of a security issue by one or more investment dealers. The formal agreement between the investment dealer and the corporation issuing the securities is called the **underwriting** agreement. A term synonymous with underwriting.

financing group

The lead underwriter of a new issue of securities brought to market by an issuing company. Also known as managing underwriters and syndicate managers.

fintech

Financial technology companies that take advantage of computer technology to provide more efficient financial products and services.

firewall

Policies implemented to separate and isolate persons within a firm who make investment decisions from persons within a firm who are privy to undisclosed material information which may influence those decisions. For example, there should be separate fax machines for research departments and sales departments.

firm commitment underwriting

The underwriter commits to buy a specified number of securities at a set price, which it then resells to the public. In a firm commitment agreement, the underwriter pays the full proceeds to the issuer, regardless of whether it has been able to resell the securities to the public. The underwriter assumes the risk of selling the security.

first-in-first-out (FIFO)

Inventory items acquired earliest are sold first.

first mortgage bonds

The senior securities of a company as they constitute a first charge on the company's assets, earnings and undertakings before unsecured current liabilities are paid.

first-order risk

Market-induced or systematic exposure to changes in the general direction of equity, fixed income, currency, and commodity markets that cannot be reduced through diversification.

fiscal agent

An investment dealer appointed by a company or government to advise it in financial matters and to manage the underwriting of its securities.

fiscal policy

The policy pursued by the federal government to influence economic growth through the use of taxation and government spending to smooth out the fluctuations of the **business cycle**.

fiscal year

A company's accounting year. Due to the nature of particular businesses, some companies do not use the calendar year for their bookkeeping. A typical example is the department store that finds December 31 too early a date to close its books after the Christmas rush and so ends its fiscal year on January 31.

fixed asset

A tangible long-term asset such as land, building or machinery, held for use rather than for processing or resale. A **statement of financial position** category.

fixed-dollar withdrawal plan

A systematic withdrawal plan where the fund holder chooses a specified dollar amount to be withdrawn on a monthly or quarterly basis.

fixed exchange rate regime

A country whose central bank maintains the domestic currency at a fixed level against another currency or a composite of other currencies.

fixed / floating preferred shares

Preferred shares that pay a fixed dividend for an initial five-year term after which, if not called by the issuer, shareholders have the option to continue receiving fixed-rate dividends that have been reset or receive a floating-rate preferred share.

fixed-income arbitrage strategy

Attempts to profit from price anomalies between related interest rate securities and their derivatives, including government and non-government bonds, mortgage-backed securities, options, swaps, and forward rate agreements.

fixed-income securities

Securities that generate a predictable stream of interest or **dividend** income, such as **bonds**, **debentures** and **preferred shares**.

fixed-period withdrawal plan

A systematic withdrawal plan where a specified amount is withdrawn over a pre-determined period with the intent that all capital will be exhausted when the plan ends.

fixed-rate perpetual preferred shares

Pays a fixed quarterly dividend, typically expressed as an annual percentage of the issue price and have no stated maturity date. Like almost all Canadian preferred shares, however, issuers have the right to call or redeem fixed-rate perpetual preferred shares on established dates at prices set at the time of issue.

fixed-reset preferred shares

Preferred shares with fixed dividend rates that periodically change or 'reset' according to a formula or process outlined at the time the shares are issued. There have been two broad types of fixed-reset preferred shares issued in Canada: rate-reset preferred shares and fixed / floating preferred shares.

flat

Means that the quoted market price of a **bond** or **debenture** is its total cost (as opposed to an accrued interest transaction). Bonds and debentures in default of interest trade flat.

float

That part of the issued shares that are outstanding and available for trading by the public, and not held by company officers, directors, or investors who hold a controlling interest in the company. Also known as public float.

floating exchange rate

A country whose central bank allows market forces alone to determine the value of its currency, but will intervene if it thinks the move in the exchange rate is excessive or disorderly.

floating rate

A term used to describe the interest payments negotiated in a particular contract. In this case, a floating rate is one that is based on an administered rate, such as the **Prime Rate**. For example, the rate for a particular note may be 2% over Prime.

floating-rate preferred shares

Dividend payments that fluctuate to reflect changes in interest rates. If interest rates rise, so will dividend payments, and vice versa.

floating-rate securities

A type of debt instrument that offers protection to investors during periods of very volatile interest rates. For example, when interest rates are rising, the interest paid on floating rate debentures is adjusted upwards every six months.

floor trader

Employee of a member of a stock exchange, who executes buy and sell orders on the floor (trading area) of the exchange for the firm and its clients.

forced conversion

When a company's stock rises in value above the **conversion price** a company may force the **convertible** security holder to exchange the security for stock by calling back the security. Faced with receiving a lower **call price** (par plus a call premium) or higher valued shares the investor is forced to convert into **common shares**.

foreign bonds

If a Canadian company issues **debt** securities in another country, denominated in that foreign country's currency, the bond is known as a foreign **bond**. A bond issued in the U.S. payable in U.S. dollars is known as a foreign bond or a "Yankee Bond." See also **Eurobond**.

foreign exchange rate risk
The risk associated with an investment in a foreign security or any investment that pays in a denomination other than Canadian dollars, the investor is subject to the risk that the foreign currency may depreciate in value.

foreign pay bond
A Canadian debt security issued in Canada but pays interest and principle in a foreign currency is known as a foreign pay **bond**. This type of security allows Canadians to take advantage of possible shifts in currency values.

forward
A forward contract is similar to a **futures** contract but trades on an OTC basis. The seller agrees to deliver a specified commodity or financial instrument at a specified price sometime in the future. The terms of a forward contract are not standardized but are negotiated at the time of the trade. There may be no secondary market.

forward agreement
An over-the-counter forward.

frictional unemployment
Unemployment that results from normal labour turnover, from people entering and leaving the workforce and from the ongoing creation and destruction of jobs.

front-end load
A sales charge applied to the purchase price of a **mutual fund** when the fund is originally purchased.

front running
Making a practice, directly or indirectly, of taking the opposite side of the market to clients, or effecting a trade for the advisor's own account prior to effecting a trade for a client.

full employment
The level of unemployment due solely to both frictional and structural factors, or when cyclical unemployment is zero.

full replication
The ETF holds all of the stocks in the same weight as the respective index. The full replication process tracks extremely close to the benchmark index, with minimal tracking error.

full, true, and plain disclosure
The general principle underlying Canadian securities legislation. All pertinent facts by those offering securities for sale to the public must be disclosed.

fully diluted earnings per share
Earnings per common share calculated on the assumption that all **convertible** securities are converted into **common** shares and all outstanding **rights**, **warrants**, **options** and contingent issues are exercised.

fundamental analysis
Security analysis based on fundamental facts about a company as revealed through its financial statements and an analysis of economic conditions that affect the company's business. See also **Technical Analysis**.

funded debt

All outstanding bonds, debentures, notes and similar debt instruments of a company not due for at least one year.

Fund Facts

A disclosure document designed to give mutual fund investors key information about a fund. The document is limited to two double-side pages in length and provides timely information that would be material to an investment decision.

fund of hedge funds

A portfolio of hedge funds overseen by a manager who determines which hedge funds to invest in and how much to invest in each.

futures-based exchange-traded fund

ETFs that invest in futures contracts of different commodities, with an underlying portfolio of money market instruments to cover the full value of the contracts. As near-term contracts approach expiration, they are rolled over into more distant contracts.

futures contract

A contract that signifies an agreement between a futures buyer and futures seller.

gatekeeper

Refers to dealers and all of their employees who are responsible for protecting the markets from potentially illegal client activities. Universal Market Integrity Rules set out specific rules that identify the gatekeeper function and formal reporting procedures.

glide path

Changes in the target-date fund’s asset allocation mix over time. The fund pursues a growth strategy in its early years by holding more risky assets. It then gradually moves towards less risky assets as the target date approaches. The fund manager adjusts the fund over time, without any action required from the fund holder.

global macro strategy

Invests in all major markets, including equities, bonds, currencies, and commodities with strategy based on predictions for major events affecting entire economies, such as shifts in government policy that alter interest rates, thereby affecting currency, stock, and bond markets.

good delivery form

When a security is sold it must be delivered to the broker properly endorsed, not mutilated and with (if any) coupons attached. To avoid these difficulties and as a general practice most securities are held by the broker.

good faith deposit

A deposit of money by the buyer or seller of a futures product which acts as a financial guarantee as to the fulfilment of the contractual obligations of the futures contract. Also called a performance bond or **margin**.

good til cancelled

An order to buy or sell that expires 90 calendar days from entry, unless the investor decides to cancel the trade sooner than the expiry date.

good til date

An order to buy or sell that expires on a date specified by the investor.

good til order

An order to buy or sell that is open until either the order is filled, the client cancels the order, the order expires on a date specified by the client, or the order expires after 90 days. There are two types of good til order: good til canceled and good til date.

goodwill

Generally understood to represent the value of a well-respected business – its name, customer relations, employee relations, among others. Considered an **intangible asset** on the **statement of financial position**.

government securities distributors

Typically an investment dealer or bank that is authorized to bid at Government of Canada debt auctions.

greensheet

Highlights for the firm's sales representatives the salient features of a new issue, both pro and con in order to successfully solicit interest to the general public. Dealers prepare this information circular for in-house use only.

greenshoe option

An activity used to stabilize the aftermarket price of a recently issued security. If the price increases above the offer price, dealers can cover their short position by exercising an overallotment option (also referred to as a greenshoe option) by either increasing demand in the case of covering a short position or increasing supply in the case of over-allotment option exercise.

gross domestic product (GDP)

The value of all goods and services produced in a country in a year.

gross profit

The amount remaining after the cost of sales is subtracted from revenue.

gross profit margin

A **profitability ratio** that shows the company's rate of profit after allowing for cost of sales.

growth industry

An industry in which sales and earnings are consistently expanding at a faster rate than in most other industries.

growth stock

Common stock of a company with excellent prospects for above-average growth; a company which over a period of time seems destined for above-average expansion.

guaranteed amount

The minimum amount payable under **death benefits** or **maturity guarantees** provided for under the terms of the **segregate fund** contract.

guaranteed bonds

Bonds issued by a crown corporation but guaranteed by the applicable government as to interest and principal payments.

guaranteed income supplement (GIS)
A pension payable to **OAS** recipients with no other or limited income.

guaranteed investment certificate (GIC)
A deposit instrument most commonly available from trust companies, requiring a minimum investment at a predetermined rate of **interest** for a stated term. Generally nonredeemable prior to maturity but there can be exceptions.

halt in trading
A temporary halt in the trading of a security to allow significant news to be reported and widely disseminated. Usually, the result of a pending merger or a substantial change in dividends or earnings.

hard retraction
With a hard retraction feature, the company must pay any redemption value in cash.

head-and-shoulders formation
A trend reversal pattern that can occur either at a market top, called a head-and-shoulders top formation, or at a market bottom, called an inverse head-and-shoulders or head-and-shoulders bottom formation. The formation consists of a shoulder, a head, and a second shoulder and the breaking of a neckline.

hedge funds
Lightly regulated pools of capital in which the hedge fund manager invests a significant amount of his or her own capital into the fund and whose offering memorandum allows for the fund to execute aggressive strategies that are unavailable to mutual funds such as short selling.

hedging
A protective manoeuvre; a transaction intended to reduce the risk of loss from price fluctuations.

high frequency trading (HFT)
A sub-set of algorithmic trading. High frequency trading is characterized by a very large number of orders for individual trades of very small size done at extremely high speed.

high-water mark
Used in the context of how a hedge fund manager is compensated. The high-water mark sets the bar above which the fund manager is paid a portion of the profits earned for the fund.

high-yield bond strategy
Investing, generally using little or no leverage, in high-yield debt securities (also known as junk bonds) of a company the manager feels may get a credit upgrade or is a potential takeover target.

holding period return
A transactional **rate of return** measure that takes into account all **cash flows** and increases or decreases in a security’s value for any time frame. Time frames can be greater or less than a year.

household account

A type of separately managed account that involves the coordination of holdings across a family or household. In this approach, one overall portfolio model is used to coordinate investment management within and across accounts for the family or the household.

hurdle rate

The rate that a hedge fund must earn before its manager is paid an incentive fee.

hypothecate

To pledge securities as collateral for a loan. Referred to as collateral assignment or hypotec in Québec for **segregated funds**.

ICE NGX Canada

A natural gas exchange, headquartered in Calgary, Alberta that provides electronic trading, central counterparty clearing and data services to the North American natural gas and electricity markets.

incentive fee

A fee based on performance paid to the fund manager. Incentive fees are usually calculated after management fees and expenses are deducted, rather than on the gross return earned by the manager.

income splitting

A tax planning strategy whereby the higher-earning spouse transfers income to the lower-earning spouse to reduce taxable income.

income tax act (ITA)

The legislation dictating the process and collection of federal tax in Canada, administered by Canada Revenue Agency.

income trusts

A type of **investment trust** that holds investments in the operating assets of a company. Income from these operating assets flows through to the trust, which in turn passes on the income to the trust unitholders.

index

A measure of the market as measured by a basket of securities. An example would be the S&P/TSX Composite Index or the S&P 500. Fund managers and investors use a stock index to measure the overall direction and performance of the market.

index fund

Sets out to match the performance of a broad market index, such as the S&P/TSX Composite Index or the FTSE Canada Universe Bond Index. Index funds are typically categorized under the type of asset class they tend to replicate.

index-linked notes

A hybrid investment product that combines the safety of a deposit instrument with some of the growth potential of an equity investment. They have grown in popularity, particularly among conservative investors who are concerned with safety of capital but want yields greater than the interest on standard interest bearing GICs or other term deposits.

indexing
A portfolio management style that involves buying and holding a portfolio of securities that matches, closely or exactly, the composition of a benchmark **index**.

individual executor
The individual selected as the executor of an estate.

individual variable insurance contract (IVIC)
The term used in the IVIC Guidelines to describe a **segregated fund** contract.

inflation
A generalized, sustained trend of rising prices.

inflation rate
The rate of change in prices. See also **Consumer Price Index**.

inflation rate risk
The risk that the value of financial assets and the purchasing power of income will decline due to the impact of **inflation** on the real returns produced by those financial assets.

information circular
Document sent to shareholders with a **proxy**, providing details of matters to come before a shareholders' meeting.

initial public offering (IPO)
A new issue of securities offered to the public for investment for the very first time. IPOs must adhere to strict government regulations as to how the investments are sold to the public.

initial sales charge
A commission paid to the financial adviser at the time that the policy is purchased. This type of sales charge is also known as an acquisition fee or a **front-end load**.

in-kind exchange
The process where a basket of stocks is exchanged for ETF units, rather than for cash.

insider
All directors and senior officers of a corporation and those who may also be presumed to have access to nonpublic or inside information concerning the company; also anyone owning more than 10% of the voting shares in a corporation. Insiders are prohibited from trading on this information.

insider report
A report of all transactions in the shares of a company by those considered to be insiders of the company and submitted each month to securities commissions.

insider trading
Trading in a security by someone who has access to non-public material information.

instalment debentures
A bond or **debenture** issue in which a predetermined amount of principal matures each year.

instalment receipts

A new issue of stock sold with the obligation that buyers will pay the issue price in a specified series of instalment payments instead of one lump sum payment. Also known as Partially Paid Shares.

institutional client
A legal entity that represents the collective financial interests of a large group. A mutual fund, insurance company, pension fund and corporate treasury are just a few examples.

institutional firm
Investment dealer that serves institutional clients exclusively.

institutional investor
Organizations, such as pension and mutual fund companies, that trade in large-share quantities or dollar amounts. They typically have a steady flow of money to invest.

institutional salesperson
Their main role is to be a relationship manager, serving as the liaison between the institutional investment dealer and client.

institutional trader
Their main role is to execute orders on behalf of clients (as an agency trader) or on behalf of the dealer (as a liability trader).

insurable interest
A person is considered to have an insurable interest in the life or health of another person from whom they derive a financial or other kind of benefit from that person.

intangible asset
An **asset** having no physical substance (e.g., **goodwill**, patents, franchises, copyrights).

integrated firm
Investment dealer that offers products and services that cover all aspects of the industry, including full participation in both the institutional and the retail markets.

inter-dealer broker
A broker that acts as a financial intermediary between investment dealers to facilitate inter-dealer transactions.

interest
Money charged by a lender to a borrower for the use of his or her money.

interest coverage ratio
A **debt ratio** that tests the ability of a company to pay the interest charges on its debt and indicates how many times these charges are covered based upon earnings available to pay them.

interest rate
The proportion of the loan calculated as interest that is payable by the borrower. Also referred to as the cost of credit.

interest rate risk
The risk that changes in interest rates will adversely affect the value of an investor's portfolio.

For example, a portfolio with a large holding of long-term bonds is vulnerable to significant loss from changes in interest rates.

International Financial Reporting Standards (IFRS)

A globally accepted high-quality accounting standard already used by public companies in over 100 countries around the world.

interval funds

A type of **mutual fund** that has the flexibility to buy back its outstanding shares periodically. Also known as closed-end discretionary funds.

intestate

A person who dies without having made a will or having made a will that was subsequently revoked (e.g., by marriage) or otherwise determined to be invalid.

in-the-money

A call option is in-the-money if its strike price is below the current market price of the underlying security. A **put option** is in-the-money if its strike price is above the current market price of the underlying security. The in-the-money amount is the option's **intrinsic value**.

intrinsic value

That portion of a **warrant** or **call** option's price that represents the amount by which the market price of a security exceeds the price at which the warrant or call option may be exercised (exercise price). Considered the theoretical value of a security (i.e., what a security should be worth or priced at in the market).

inventory

The goods and supplies that a company keeps in stock. A **statement of financial position** item.

inventory turnover ratio

Cost of sales divided by **inventory**. The ratio may also be expressed as the number of days required to sell current inventory by dividing the ratio into 365.

inverse ETF

An ETF that seeks to replicate, net of expenses, the inverse performance of a reference index.

investment

The use of money to make more money, to gain income or increase capital or both.

investment advisor (IA)

An individual licensed to transact in the full range of securities. IAs must be registered by the securities commission of the province in which he or she works. The term refers to employees of **SRO** member firms only. Also known as a Registrant or Registered Representative (RR).

investment banker

Responsible for building the dealer's business with respect to corporate and public finance, and mergers and acquisition services.

investment boutique

A small retail or institutional investment dealer that specializes in a specific market segment such as stock trading, bond trading, unlisted stocks, arbitrage, portfolio management, targeted industry research, underwriting junior mines, oils and industrials, mutual fund distributions, or tax-shelter sales.

investment company

A company which uses its capital to invest in other companies. See also **Investment Fund**.

investment counsellor

A professional engaged to give investment advice on securities for a fee.

investment dealer

A person or company that engages in the business of trading in securities in the capacity of an agent or principal and is a member of IIROC.

investment fund

A fund or company that sells units or shares and invests the proceeds in a portfolio of securities. There are two principal types: **closed-end** and **open-end** or **mutual fund**. Shares in closed-end investment companies are readily transferable in the open market and are bought and sold like other shares. Capitalization is fixed. Open-end funds sell their own new shares to investors, buy back their old shares, and are not listed. Open-end funds are so-called because their capitalization is not fixed; they normally issue more shares or units as people want them.

Investment Industry Association of Canada (IIAC)

A member-based professional association that represents the interests of market participants.

Investment Industry Regulatory Organization of Canada (IIROC)

The Canadian investment industry's national self-regulatory organization. IIROC carries out its regulatory responsibilities through setting and enforcing rules regarding the proficiency, business and financial conduct of dealer firms and their registered employees and through setting and enforcing market integrity rules regarding trading activity on Canadian equity marketplaces.

investment policy statement

The agreement between a portfolio manager and a client that provides the guidelines for the manager.

investment representative

A person who is licensed to sell securities but is not permitted to give investment advice.

investments in associates

The ownership a company has in another company. As a general rule, significant influence is presumed to exist when a company owns 20% or more of the voting rights of the other company.

investor

One whose principal concern is the minimization of risk, in contrast to the **speculator**, who is prepared to accept calculated risk in the hope of making better-than-average profits, or the gambler, who is prepared to take even greater risks.

irrevocable beneficiary

A beneficiary whose entitlements under the **segregated fund** contract cannot be terminated or changed without his or her consent.

irrevocable designation

A contract where the beneficiary's entitlements under the segregated fund contract cannot be terminated or changed without his or her consent.

issue
Any of a company's securities; the act of distributing such securities.

issued shares
That part of **authorized shares** that have been sold by the corporation and held by the shareholders of the company.

Joint tenancy
Ownership where two or more people own assets together, and each owner has equal rights and obligations regarding the asset.

junior bond issue
A corporate bond issue, the collateral for which has been pledged as security for other more senior debt issues and is therefore subject to these prior claims.

junior debt
One or more **junior bond issues**.

Know Your Client (KYC)
The cardinal rule in making investment recommendations. All relevant information about a client must be known in order to ensure that the registrant's recommendations are suitable. KYC requires you to understand a client's personal and financial circumstances, investment knowledge, investment needs and objectives, risk profile, and investment time horizon.

Know Your Product rule (KYP)
The rule that requires you to know certain aspects of the products you recommend, including a product's features, risks, costs, and potential performance in different types of market environments.

kurtosis
Measures the tendency of a return distribution either to have values that collect around the average of all returns (lower kurtosis) or conversely, to have values that collect towards the tails of the distribution (higher kurtosis).

labour force
The sum of the population aged 15 years and over who are either employed or unemployed.

labour-sponsored venture capital corporations (LSVCC)
LSVCCs are investment funds, sponsored by labour organizations, that have a specific mandate to invest in small to medium-sized businesses. To encourage this mandate,

governments offer generous tax credits to investors in LSVCCs.

lagging indicators

A selection of statistical data, that on average, indicate highs and lows in the business cycle behind the economy as a whole. These relate to business expenditures for new plant and equipment, consumers' instalment credit, short-term business loans, the overall value of manufacturing and trade inventories.

last price

The price at which the last trade on a stock occurred. See also **Market Price**.

leading indicators

A selection of statistical data that, on average, indicate highs and lows in the business cycle ahead of the economy as a whole. These relate to employment, capital investment, business starts and failures, profits, stock prices, inventory adjustment, housing starts and certain commodity prices.

LEAPS

Long Term Equity Anticipation Securities are long-term (2-3 year) option contracts.

leverage

The effect of fixed charges (i.e., debt interest or preferred dividends, or both) on per-share earnings of **common** stock. Increases or decreases in income before fixed charges result in magnified percentage increases or decreases in **earnings per common share**. Leverage also refers to seeking magnified percentage returns on an investment by using borrowed funds, **margin accounts** or securities which require payment of only a fraction of the underlying security's value (such as rights, warrants or options).

leveraged ETF

An ETF that delivers daily investment results that correspond to a multiple of the daily performance of a reference index.

liabilities

Debts or obligations of a company, usually divided into **current liabilities**—those due and payable within one year—and long-term liabilities—those payable after one year. A **statement of financial position** category.

liability traders

Have the responsibility to manage a dealer's trading capital to encourage market flows and facilitate the client orders that go into the market, while aiming to lose as little of that capital as possible. Liability traders can be considered those who set the direction for **agency traders**. Whereas agency traders have formal client responsibilities, liability traders have lighter responsibilities or none at all.

life cycle hypothesis

A model used in financial planning that tries to link age with investing. The underlying theory is that an individual's asset mix will change, as they grow older. However the life cycle is not a substitute for the "know your client rule".

life expectancy-adjusted withdrawal plan

Withdrawals are designed to deplete the entire investment by the end of the plan, while providing as high an income as possible during the plan holder's expected lifetime. The amount withdrawn on each date is based on periods that are continually readjusted to the changing life expectancy of the plan holder. Readjustments are based on mortality tables.

limit order
A client’s order to buy or sell securities at a specific price or better. The order will only be executed if the market reaches or betters that price.

limited liability
The word limited at the end of a Canadian company’s name implies that liability of the company’s shareholders is limited to the money they paid to buy the shares. By contrast, ownership by a **sole proprietor** or **partnership** carries unlimited personal legal responsibility for debts incurred by the business.

limited partnership
A type of partnership whereby a limited partner cannot participate in the daily business activity and liability is limited to the partner’s investment.

linked notes
A debt instrument that guarantees the invested capital and whose return is based on the return of an underlying investment like an index.

liquidator
The person in Quebec who settles the estate and distributes the assets according to the terms of a will.

liquid bond
Bonds that trade in significant volumes and can be made quickly without a significant sacrifice on the price.

liquidity
1. The ability of the market in a particular security to absorb a reasonable amount of buying or selling at reasonable price changes. 2. A corporation’s current assets relative to its current liabilities; its cash position.

liquidity preference theory
A theory that tries to explain the shape of the **yield curve**. It postulates that investors want to invest for the short-term because they are risk averse. Borrowers, however, want long-term money. In order to entice investors to invest long-term, borrowers must offer higher rates for longer-term money. This being the case, the yield curve should slope upwards reflecting the higher rates for longer borrowing periods.

liquidity ratios
Financial ratios that are used to judge the company’s ability to meet its short-term commitments. See **Current Ratio**.

liquidity risk
The risk that an investor will not be able to buy or sell a security quickly enough because buying or selling opportunities are limited.

listed stock
The stock of a company which is traded on a stock exchange.

listing agreement

A stock exchange document published when a company’s shares are accepted for listing. It provides basic information on the company, its business, management, assets, capitalization and financial status.

load

The portion of the offering price of shares of most open-end investment companies (**mutual funds**) which covers sales commissions and all other costs of distribution.

lock-up period

The time during which initial investments cannot be redeemed from a hedge fund.

long position

Signifies ownership of securities. “I am long 100 BCE common” means that the speaker owns 100 **common shares** of BCE Inc.

long/short equity strategy

Managers try to buy stocks they feel will rise more in a bull market than the overall market and sell short stocks that will rise less. In a down market, good short selections are expected to decline more than the market and good long selections will fall less.

Long-Term Equity Anticipation Security

Long-term (2-3 year) option contracts. Also known as LEAPS.

long-term bond

A bond with greater than 10 years remaining to maturity.

Lynx

A Payments Canada electronic system for the transfer of high-value payments between participating financial institutions. Also, a key tool used by the Bank of Canada to conduct monetary policy.

macroeconomics

Macroeconomics focuses on the performance of the economy as a whole. It looks at the broader picture and to the challenges facing society as a result of the limited amounts of natural resources, human effort and skills, and technology.

major trend

Underlying price trend prevailing in a market despite temporary declines or rallies.

managed account

An account whereby a licensed portfolio manager has the discretion to decide and execute suitable investment decisions on behalf of clients.

managed product

A pool of capital gathered to buy securities according to a specific investment mandate. The pool seeds a fund managed by an investment professional that is paid a management fee to carry out the mandate.

management expense ratio

The total expense of operating a **mutual fund** expressed as a percentage of the fund's **net asset value**. It includes the **management fee** as well as other expenses charged directly to the fund such as administrative, audit, legal fees etc., but excludes brokerage fees. Published rates of return are calculated after the management expense ratio has been deducted.

management fee

The fee that the manager of a **mutual fund** or a **segregated fund** charges the fund for managing the portfolio and operating the fund. The fee is usually set as fixed percentage of the fund's net asset value.

managers' discussion and analysis (MD&A)

A document that requires management of an issuer to discuss the dynamics of its business and to analyze its financial statements with the focus being on information about the issuer's financial condition and operations with emphasis on liquidity and capital resources.

margin

The amount of money paid by a client when he or she uses credit to buy a security. It is the difference between the market value of a security and the amount loaned by an investment dealer.

margin account

Account used to buy or sell securities on partial credit. In such cases, the client pays only a portion of the purchase price and the investment dealer lends the balance to the client. Short sales can only take place in a margin account.

Margin Account Agreement Form

A contract that must be completed and signed by a client and approved by the firm in order to open a margin account. This sets out the terms and conditions of the account.

margin call

When an investor purchases an account on margin in the expectation that the share value will rise, or shorts a security on the expectation that share price will decline, and share prices go against the investor, the brokerage firm will send out a margin call requiring that the investor add additional funds or marketable securities to the account to protect the broker's loan.

marginal tax rate

The tax rate that would have to be paid on any additional dollars of taxable income earned.

market

Any arrangement whereby products and services are bought and sold, either directly or through intermediaries.

market economy

An economic system where the decisions regarding investment, production, and distribution of goods and services are guided by the price signals created by the forces of supply and demand.

MarketAxess

Provides market data and a trading platform with access to multi-dealer competitive pricing for a wider range of corporate bonds and other types of fixed-income instruments. MarketAxess is a member of IIROC.

market capitalization

The dollar value of a company based on the market price of its issued and outstanding common shares. It is calculated by multiplying the number of outstanding shares by the current market price of a share.

market-linked guaranteed investment certificate
Market-linked GICs combine the guarantee of the principal invested with some of the growth potential of an underlying market in the form of a stock index, mutual fund, or ETF.

market maker
A trader employed by a securities firm who is authorized and required, by applicable self-regulatory organizations (SROs), to maintain reasonable liquidity in securities markets by making firm bids or offers for one or more designated securities.

market order
An order placed to buy or sell a security immediately at the best current price.

market out clause
A clause in a prospectus that permits the underwriter to cancel an offering without penalty under certain conditions.

market price
The price at which the last trade on a stock occurred. See also **Last Price**.

market risk
The non-controllable or systematic risk associated with equities.

market segmentation theory
A theory on the structure of the **yield** curve. It is believed that large institutions shape the yield curve. The banks prefer to borrow short term while the insurance industry, with a longer horizon, prefers long-term money. The supply and demand of the large institutions shapes the curve.

marketability
A measure of the ability to buy and sell a security. A security has good marketability if there is an active secondary market in which it can be easily bought and sold at a fair price.

marketable bonds
Bonds for which there is a ready market (i.e., clients will buy them because the prices and features are attractive).

marking to market
The process in the futures market in which the daily price changes are paid by the parties incurring losses to the parties earning profits.

married put or a put hedge
The purchase of an underlying asset and the purchase of a put option on that underlying asset.

material change
A change in the affairs of a company that is expected to have a significant effect on the market value of its securities.

material fact
A fact that would be expected to have an effect on the market value of its securities if the fact was expressed.

mature industry

An industry that experiences slower, more stable growth rates in profit and revenue than growth or emerging industries, for example.

maturity

The date on which a loan or a **bond** or **debenture** comes due and is to be paid off.

maturity date

The date at which the contract expires, and the time at which any **maturity guarantees** are based. Segregated fund contracts normally mature in 10 years, although companies are allowed to set longer periods. Maturities of less than 10 years are permitted only for funds such as protected mutual funds, which are regulated as securities and are not segregated funds.

maturity guarantee

The minimum dollar value of the contract after the guarantee period, usually 10 years. This amount is also known as the annuity benefit.

maximum drawdown

The largest drawdown during a specific period.

medium-term bond

A bond with 5 to 10 years remaining to maturity.

merger strategy

Investing simultaneously in long and short positions of the common stock of companies involved in a proposed merger or acquisition, usually involving taking a long position in the company being acquired and a short position in the acquiring company. Also known as risk arbitrage strategy.

microeconomics

Analyzes the market behaviour of individual consumers and firms, how prices are determined, and how prices determine the production, distribution, and use of goods and services.

minimum investment exemption

An investor exemption from receiving a prospectus based on a prescribed minimum investment. NI 45-106 sets the minimum across Canada at $150,000.

Modified Dietz method

This method of fund valuation reduces the extensive calculations of the daily valuation method by providing a good approximation. It assumes a constant rate of return through the period, eliminating the need to value the portfolio on the date of each cash flow. The Modified Dietz method weights each cash flow by the length of time it is held in the portfolio.

monetarists

School of economic theory which states that the level of prices as well as economic output is determined by an economy's money supply. This school of thought believes that control of the money supply is more vital to economic prosperity than the level of government spending, for example. See also **Keynesian Policy**.

monetary aggregates

An aggregate that measures the quantity of money held by a country's households, firms and governments. It includes various forms of money or payment instruments grouped according to their degree of liquidity, such as M1, M2 or M3.

monetary policy

Economic policy designed to improve the performance of the economy by regulating money supply and credit. The Bank of Canada achieves this through its influence over short-term interest rates.

money market

That part of the **capital** market in which short-term financial obligations are bought and sold. These include **treasury bills** and other federal government securities, and **commercial paper**, and **bankers' acceptances** and other instruments with one year or less left to maturity. Longer term securities, when their term shortens to the limits mentioned, are also traded in the money market.

money purchase plan (MPP)

A type of **Registered Pension Plan** where the amount contributed is known but the dollar amount of the pension to be received is unknown. Also called a defined contribution plan.

Montréal Exchange (ME)

See **Bourse de Montréal**.

mortgage

A contract specifying that certain property is pledged as security for a loan.

mortgage-backed securities

Bonds that claim ownership to a portion of the cash flows from a group or pool of mortgages. They are also known as mortgage pass-through securities. A servicing intermediary collects the monthly payments from the issuers and, after deducting a fee, passes them through (i.e., remits them) to the holders of the security. The MBS provides liquidity in an otherwise illiquid market. Every month, holders receive a proportional share of the interest and principal payments associated with those mortgages.

mortgage bond

A bond issue secured by a **mortgage** on the issuer's property.

mortgage pass-through securities

See **Mortgage-Backed Securities**.

moving average

The average of security or commodity prices calculated by adding the closing prices for the underlying security over a pre-determined period and dividing the total by the time period selected.

multi-disciplinary accounts

Fee-based accounts that are an evolution of separately managed accounts. With multi-disciplinary accounts, separate models are combined into one overall portfolio model in a single account.

multi-manager accounts

A type of fee-based account that offers clients and their advisors more choice in terms of product and services. Often, clients are aligned with two or more portfolio models and each portfolio model is a component of the client's greater diversified holdings.

multiple

A colloquial term for the **price-to-earnings** ratio of a company's common shares.

mutual fund

An **investment fund** operated by a company that uses the proceeds from shares and units sold to investors to invest in stocks, bonds, derivatives and other financial securities. Mutual funds offer investors the advantages of diversification and professional management and are sold on a load or no-load basis. Mutual fund shares/units are redeemable on demand at the fund's current **net asset value per share** (NAVPS).

Mutual Fund Dealers Association (MFDA)

The Self-Regulatory Organization (SRO) that regulates the distribution (dealer) side of the mutual fund industry in Canada.

Mutual Fund Dealers Association Investor Protection Corporation

Provides protection for eligible customers of insolvent MFDA member firms.

mutual fund wraps

Are established with a selection of individual funds managed within a client's account. Mutual fund wraps differ from funds of funds. The client holds the actual funds within their account, as opposed to a fund that simply invests in other funds. In most cases, a separate account is established for the client and the selected funds are held inside that dedicated account.

naked call

A seller of a call option contract who does not own an offsetting position in the underlying security or a suitable alternative.

naked writer

A seller of an **option** contract who does not own an offsetting position in the underlying security or a suitable alternative.

NASDAQ

An acronym for the National Association of Securities Dealers Automated Quotation System. NASDAQ is a computerized system that provides brokers and dealers with price quotations for securities traded OTC.

national debt

The accumulation of total government borrowing over time. It is the sum of past deficits minus the sum of past surpluses.

national policies

The Canadian Securities Administrators have developed a number of policies that are applicable across Canada. These coordinated efforts by the CSA are an attempt to create a national securities regulatory framework. Copies of policies are available from each provincial regulator.

National Do Not Call List (DNCL)

The Canadian Radio-television and Telecommunications Commission (CRTC) has established Rules that telemarketers and organizations that hire telemarketers must follow. The DNCL Rules prohibit telemarketers and clients of telemarketers from calling telephone numbers that have been registered on the DNCL for more than 31 days.

National Instrument 81-101

This legislation deals with mutual fund prospectus and Fund Facts disclosure.

National Instrument 81-102

This legislation, and its companion policy, contain requirements and guidelines for the distribution and advertising of mutual funds.

National Registration Database (NRD)

A web-based system that permits mutual fund salespersons and investment advisors to file applications for registration electronically.

natural unemployment rate

Also called the full employment unemployment rate. At this level of unemployment, the economy is thought to be operating at close to its full potential or capacity.

neckline

The line joining the two recovery points in a head-and-shoulders formation. The breaking of a neckline, either a downside break-out or upside break-out, accompanied by increased volume may be considered confirmation of a change in trend.

negative interest rate

Interest rate falls below zero. In a negative interest rate environment, banks may charge their customers for keeping deposits and banks may pay customers to take a loan.

negative pledge provision

A protective provision written into the trust indenture of a company's debenture issue providing that no subsequent mortgage bond issue may be secured by all or part of the company's assets, unless at the same time the company's debentures are similarly secured.

negotiable bond

A bond certificate that is transferable by delivery and which, in the case of a registered certificate, has been duly endorsed and guaranteed.

negotiated offer

A term describing a particular type of financing in which the investment dealer negotiates with the corporation on the issuance of securities. The details would include the type of security to be issued, the price, coupon or dividend rate, special features and protective provisions.

NEO Exchange

An exchange that provides listing services and facilitates trading in securities listed on the NEO Exchange, TSX, and the TSX Venture Exchange.

net asset value

For a **mutual fund**, net asset value represents the market value of the fund's share and is calculated as total assets of a corporation less its liabilities. Net asset value is typically calculated at the close of each trading day. Also referred to as the **book value** of a company's different classes of securities.

net asset value per share

For a **mutual fund**, net asset value per share represents the market value of the fund's share per unit and is calculated as total assets of a corporation less its liabilities, then divided by the total units outstanding.

net change

The change in the price of a security from the closing price on one day to the closing price on the following trading day. In the case of a stock which is entitled to a **dividend** one day, but is traded ex-dividend the next, the dividend is not considered in computing the change. The same applies to **stock splits**. A stock selling at $100 the day before a two-for-one split and trading the next day at $50 would be considered unchanged. The net change is ordinarily the last figure in a stock price list. The mark +1.10 means up $1.10 a share from the last sale on the previous day the stock traded.

net current assets

See **working capital**

net profit margin

A **profitability ratio** that indicates how efficiently the company is managed after taking into account both expenses and taxes.

New Account Application Form (NAAF)

A form that is filled out by the client and the IA at the opening of an account. It gives relevant information to make suitable investment recommendations. The NAAF must be completed and approved before any trades are put through on an account.

new issue

An offering of stocks or bonds sold by a company for the first time. Proceeds may be used to retire outstanding securities of the company, to purchase fixed assets or for additional working capital. New debt issues are also offered by government bodies.

New York Stock Exchange (NYSE)

Oldest and largest stock exchange in North America with more than 1,600 companies listed on the exchange.

NEX

A new and separate board of the TSX Venture Exchange that provides a trading forum for companies that have fallen below the Venture Exchange’s listing standards. Companies that have low levels of business activity or who do not carry on active business will trade on the NEX board, while companies that are actively carrying on business will remain with the main TSX Venture Exchange stock list.

no-load fund

A fund that does not charge a fee to purchase or redeem units.

no par value (n.p.v.)

Indicates a common stock has no stated face value.

nominal gross domestic product

Gross domestic product based on prices prevailing in the same year not corrected for inflation. Also referred to as current dollar or chained dollar GDP.

nominal interest rate

The quoted or stated rate on an investment or a loan. This rate allows for comparisons but does not take into account the effects of inflation.

nominal rate

The quoted or stated rate.

nominee

A person or firm (bank, investment dealer, CDS) in whose name securities are registered. The shareholder, however, retains the true ownership of the securities.

non-client and professional orders

A type of order for the account of partners, directors, officers, major shareholders, IAs and employees of member firms that must be marked “PRO”, “N-C” or “Emp”, in order to ensure that client orders are given priority for the same securities.

non-competitive tender

A method of distribution used in particular by the Bank of Canada for Government of Canada marketable bonds. **Primary** distributors are allowed to request **bonds** at the average price of the accepted **competitive tenders**. There is no guarantee as to the amount, if any, received in response to this request.

non-controlling interest

1. The equity of the shareholders who do not hold controlling interest in a controlled company;
2. In **consolidated financial statements** (i) the item in the **statement of financial position** of the parent company representing that portion of the **assets** of a consolidated subsidiary considered as accruing to the shares of the subsidiary not owned by the parent; and (ii) the item deducted in the **statement of comprehensive income** of the parent and representing that portion of the subsidiary’s earnings considered as accruing to the subsidiary’s shares not owned by the parent.

non-cumulative

A preferred dividend that does not accrue or accumulate if unpaid.

non-current asset

Assets which in the normal course of business would not be converted into cash. Noncurrent assets include property, plant, and equipment.

non-current liability

Money owed but not due to be paid within a year. Noncurrent liabilities include long-term debt and deferred tax.

non-systematic risk

Also known as specific risk. Non-systematic risk is the risk that the price of a specific security or a specific group of securities will change in price to a different degree or in a different direction from the market as a whole.

notional units

A unit that exists in theory and is representative of something else.

odd lot

A number of shares which is less than a **standard trading unit**. Usually refers to a securities trade for less than 100 shares, sometimes called a broken lot. Trading in less than 100 shares typically incurs a higher per share commission.

of record

On the company’s books or records. If, for example, a company announces that it will pay a

dividend on January 15 to shareholders of record, every shareholder whose name appears on the company's books on that date will be sent a dividend cheque from the company.

offer

The lowest price at which a person is willing to sell; as opposed to bid which is the highest price at which one is willing to buy.

offering memorandum

This document is prepared by the dealer involved in a new issue outlining some of the salient features of the new issue, but not the price or other issue-specific details. It is used as a pre-marketing tool in assessing the market for the issue as well as for obtaining expressions of interest.

offering memorandum exemption

The offering memorandum exemption waives the requirement for a fund to be distributed with a prospectus.

offering price

The price that an investor pays to purchase shares in a **mutual fund**. The offering price includes the charge or load that is levied when the purchase is made.

offsetting transaction

A futures or option transaction that is the exact opposite of a previously established long or short position.

Office of the Superintendent of Financial Institutions (OSFI)

The federal regulatory agency whose main responsibilities regarding insurance companies and **segregated funds** are to ensure that the companies issuing the funds are financially solvent.

officers

Corporate employees responsible for the day-to-day operation of the business.

old age security (OAS)

A government pension plan payable at age 65 to all Canadian citizens and legal residents.

Ombudsman for Banking Services and Investments (OBSI)

An independent organization that investigates customer complaints against financial services providers.

on-stop buy order

Also known as a stop buy order, it is the opposite of an on-stop sell order – that is, an order to buy a stock at or above a certain price. On-stop buy orders are used to protect a short position when the stock's price is rising, or to ensure that a stock is purchased while its price is rising.

on-stop orders

Orders that are used to buy or sell after a stock has reached a certain price. See on-**stop buy orders**, on-**stop sell orders, stop buy orders, stop loss orders**.

on-stop sell order

Also known as a stop loss order, it is an order that is specifically used in connection with a sell order where the limit price is below the existing market price. The order is triggered when the stock drops to the specified level. The purpose is to reduce the amount of loss that might be incurred or to protect at least part of a paper profit when a stock's price declines.

origination
The process of bringing new debt issues to market.

open-end fund
See **Mutual Fund**.

open-end trust
The most common structure for a mutual fund. An unincorporated open-end trust structure allows the trust to avoid taxation by flowing capital gains and income, net of fees and expenses, to unit holders.

open interest
The total number of outstanding option contracts for a particular **option** series. An opening transaction would increase open interest, while a closing transaction would decrease open interest. It is used as one measure of an option class's liquidity.

open market operations
Method through which the Bank of Canada influences interest rates by trading securities with participants in the money market.

opening transaction
An option transaction that is considered the initial or primary transaction. An opening transaction creates new rights for the buyer of an **option**, or new obligations for a seller. See also **Closing Transaction**.

operating band
The Bank of Canada's 50-basis-point range for the overnight lending rate. The top of the band, the **Bank Rate**, is the rate charged by the Bank on **Lynx** advances to financial institutions. The bottom of the band is the rate paid by the Bank on any **Lynx** balances held overnight by those institutions. The middle of the operating band is the target for the overnight rate.

operating income
The income that a company records from its main ongoing operations.

operating performance ratios
A type of ratio that illustrates how well management is making use of company resources.

operational risk
The significant risk of potential system failures, as well as faulty settlement, reporting, and accounting procedures, that can be part of the small newly created businesses that typify alternative strategy funds.

option
A right to buy or sell specific securities or properties at a specified price within a specified time. See **Put Options** and **Call Options**.

option premium
The amount paid to enter into an option contract, paid by the buyer to the seller or writer of the contract.

option writer

The seller of the option who may be obligated to buy (put writer) or sell (call writer) the underlying interest if assigned by the option buyer.

order flow

The total amount of equity trades shown to a dealer's traders by its institutional clients.

oscillator

A **technical analysis** indicator used when a stock's chart is not showing a definite trend in either direction. When the oscillator reading reaches an extreme value in either the upper or lower band, this suggest that the current price move has gone too far. This may indicate that the price move is overextended and vulnerable.

out-of-the-money

A **call option** is out-of-the-money if the market price of the underlying security is below its **strike price**. A **put option** is out-of-the-money if the market price of the underlying security is above the strike price.

output gap

The difference between the actual level of output and the potential level of output when the economy is using all available resources of capital and labour.

outstanding shares

That part of **issued shares** which remains outstanding in the hands of investors.

over-allotment option

An activity used to stabilize the aftermarket price of a recently issued security. If the price increases above the offer price, dealers can cover their short position by exercising an overallotment option (also referred to as a **greenshoe** option) by either increasing demand in the case of covering a short position or increasing supply in the case of over-allotment option exercise.

overcontribution

An amount made in excess to the annual limit made to an **RRSP**. An overcontribution in excess of$2,000 is penalized at a rate of 1% per month.

overlay manager

The overlay manager works with advisors in servicing clients. This is not a referral but a partnership, in which the advisor retains the client's assets. The service incorporates the existing trusted relationship of the advisor, whom the client has become comfortable dealing with.

over-the-counter (OTC)

A market for securities made up of securities dealers who may or may not be members of a recognized stock exchange. Over-the-counter is mainly a market conducted over the telephone. Also called the **unlisted**, inter-dealer or street market. NASDAQ is an example of an over-the-counter market.

overnight rate

The interest rate set in the overnight market.

overnight repo

A transaction where the Bank of Canada offers to purchase securities from financial institutions with an agreement to sell them back the next business day at a predetermined price.

overnight reverse repo

A transaction where the Bank of Canada offers to sell securities to financial institutions with an agreement to buy them back the next business day at a predetermined price.

paper profit

An unrealized profit on a security still held. Paper profits become realized profits only when the security is sold. A paper loss is the opposite to this.

par value

The stated **face value** of a **bond** or stock (as assigned by the company's charter) expressed as a dollar amount per share. Par value of a common stock usually has little relationship to the current market value and so no par value stock is now more common. Par value of a **preferred** stock is significant as it indicates the dollar amount of assets each preferred share would be entitled to should the company be liquidated.

pari passu

A legal term meaning that all securities within a series have equal rank or claim on earnings and assets. Usually refers to equally ranking issues of a company's **preferred** shares.

participation rate

The share of the working-age population (15 and older) that is in the labour market, either working or looking for work. Also, the limit on the return paid by an issuer to an investor is known as the participation rate.

partnership

A form of business organization that involves two or more people contributing to the business and legislated under the federal Partnership Act.

passive investment strategy

The investor or manager employing a passive investment strategy would attempt to replicate the performance of a specific market index without trying to beat it.

passive management

Managers of passively managed funds do not make security selections; they assume only the systematic risk associated with investing in a particular asset class. The most common type of passively managed fund is one that attempts to replicate the returns of a market index.

past service pension adjustment (PSPA)

An employer may increase a member's pension by the granting of additional past service benefits to an employee in a **defined benefit plan**. Plan members who incur a PSPA will have their **RRSP** contribution room reduced by the amount of this adjustment.

Payments Canada

Established in the 1980 revision of the Bank Act, this association operates a highly automated national clearing system for interbank payments. Members include chartered banks, trust and loan companies and some credit unions and caisses.

peer group

A group of managed products (particularly mutual funds) with a similar investment mandate.

pension adjustment (PA)

The amount of contributions made, or the value of benefits accrued to a member of an employer-sponsored retirement plan for a calendar year. The PA enables the individual to determine the amount that may be contributed to an **RRSP** that would be in addition to contributions into a **Registered Pension Plan**.

pension fund

A pension fund is a pool of assets managed with the goal of supplying its beneficiaries with income during their retirement years.

percentage change

The degree of change over time based on a comparison between the beginning value and ending value.

performance bonds

What is often required upon entry into a futures contract giving the parties to a contract a higher level of assurance that the terms of the contract will eventually be honoured. The performance bond is often referred to as margin.

Phillips curve

A graph showing the relationship between inflation and unemployment. The theory states that unemployment can be reduced in the short run by increasing the price level (inflation) at a faster rate. Conversely, inflation can be lowered at the cost of possibly increased unemployment and slower economic growth.

physical-based ETF

An ETF that invests in the commodity directly. They are limited to only a few storable, non-perishable commodities, such as gold and silver.

point

In the case of a stock market index, a point refers to a single unit and is typically equivalent to $1. In the case of **bonds** and **debentures**, it means 1% of the issue's **par value**, which is almost universally 100. On a $1,000 bond, one point represents 1% of the face value of the bond or $10.

point change

In the case of a stock market index, a point change refers to the number of units of change in the index. For example, if the DJIA changes from 10,000 to 10,100, this would be referred to as a 100-point change.

political risk

The risk associated with a government introducing unfavourable policies making investment in the country less attractive. Political risk also refers to the general instability associated with investing in a particular country.

pooled account

A type of managed product structure whereby by investors' funds are gathered into a legal structure, usually a trust or corporation. An investor's claim to the pool's returns is proportional to the number of shares or units the investor owns. The pools are often open-ended, which means units are issued when there are net cash inflows to the fund, or units are redeemed when there are net cash outflows.

pooled registered pension plan

A type of retirement savings plan offered by the federal government. The plan is designed to address the gap in employer pension plan coverage by providing Canadians with an accessible, large-scale, low-cost pension plan.

portfolio

Holdings of securities by an individual or institution. A portfolio may contain debt securities, preferred and common stocks of various types of enterprises and other types of securities.

potential output

The maximum amount of output the economy is capable of producing during a given period when all of its available resources are employed to their most efficient use.

pre-authorized contribution plan

A pre-authorized plan to make regular purchases in small amounts.

preferred dividend coverage ratio

A type of profitability ratio that measures the amount of money a firm has available to pay dividends to their preferred shareholders.

preferred shares

A class of share capital that entitles the owners to a fixed **dividend** ahead of the company's common shares and to a stated dollar value per share in the event of liquidation. Usually do not have **voting rights** unless a stated number of dividends have been omitted. Also referred to as preference shares.

preliminary prospectus

The initial document released by an underwriter of a new securities issue to prospective investors.

premium

The amount by which a **preferred** stock or **debt** security may sell above its **par value**. In the case of a new issue of **bonds** or stocks, the amount the market price rises over the original selling price. Also refers to that part of the **redemption** price of a bond or preferred share in excess of face value, par value or market price. In the case of **options**, the price paid by the buyer of an option contract to the seller.

prepaid expenses

Payments made by the company for services to be received in the near future. For example, rents, insurance premiums and taxes are sometimes paid in advance. A **statement of financial position** item.

prepayment risk

The risk that the issuer of a bond might prepay or redeem early some or all principal outstanding on the loan or mortgage.

prescribed number of units

Increments of shares, typically consisting of 10,000, 25,000 or 50,000 shares, set by the respective ETF company, are called the prescribed number of units.

prescribed rate

A quarterly interest rate set out or prescribed by Canada Revenue Agency under **attribution** rules. The rate is based on the Bank of Canada rate.

present value
The current worth of a sum of money that will be received sometime in the future.

price-to-earnings ratio or P/E ratio
A **value ratio** that gives investors an idea of how much they are paying for a company's earnings. Calculated as the current price of the stock divided current **earnings per share**.

price spread
The difference between the bid and ask price. Also known as the dealer's spread.

primary dealer
A government securities distributor that maintains a certain threshold of activity.

primary market
The market for new issues of securities. The proceeds of the sale of securities in a primary market go directly to the company issuing the securities. See also **Secondary Market**.

primary market distribution
The issuance of securities in the primary market**.**

primary offering
The original sale of any issue of a company's securities.

prime brokerage
A bundling of equity trading-related services used primarily by hedge funds.

prime rate
The interest rate chartered banks charge to their most credit-worthy borrowers.

principal
The person for whom a broker executes an order, or a **dealer** buying or selling for its own account. The term may also refer to a person's capital or to the face amount of a **bond**.

principal-protected note
A debt-like instrument with a maturity date whereby the issuer agrees to repay investors the amount originally invested (the principal) plus interest. The interest rate is tied to the performance of an underlying asset, such as a portfolio of mutual funds or common stocks, a market index, a hedge fund or a portfolio of hedge funds. PPNs guarantee only the return of the principal.

private corporation
Companies that have charters that restrict the right of shareholders to transfer shares, limit the number of shareholders to no more than 50, and prohibit shareholders from inviting the public to subscribe for their securities.

private equity
The financing of firms unwilling or unable to find capital using public means—for example, via the stock or bond markets.

private family office
An extension of the advisor's client servicing approach. In this approach, instead of having only one advisor, a team of professionals handles all of an affluent client's financial affairs within one

central location.

private placement
The underwriting of a security and its sale to a few buyers, usually institutional, in large amounts.

pro rata
In proportion to. For example, a **dividend** is a pro rata payment because the amount of dividend each shareholder receives is in proportion to the number of shares he or she owns.

probate
A provincial fee charged for authenticating a **will**. The fee charged is usually based on the value of the assets in an estate rather than the effort to process the will.

product transparency
The level of ongoing information regarding investment products, evaluated on level of details provided, frequency of communication and time between fund reporting date and date of communication to investors.

productivity
The amount of output per worker used as a measure of efficiency with which people and capital are combined in the output of the economy. Productivity gains lead to improvements in the standard of living, because as labour, capital, etc. produce more, they generate greater income.

professional (PRO) order
A type of order for the account of partners, directors, officers, major shareholders, IAs and employees of member firms that must be marked “PRO”, “N-C” or “Emp”, in order to ensure that client orders are given priority for the same securities.

profit
That part of a company’s revenue remaining after all expenses and taxes have been paid and out of which dividends may be paid.

profitability ratios
Financial ratios that illustrate how well management has made use of the company’s resources.

program trading
A sophisticated computerized trading strategy whereby a portfolio manager attempts to earn a profit from the price spreads between a portfolio of equities similar or identical to those underlying a designated stock index, e.g., the Standard & Poor 500 Index, and the price at which **futures** contracts (or their options) on the index trade in financial futures markets. Also refers to switching or trading blocks of securities in order to change the asset mix of a portfolio.

proprietary trader
Proprietary traders have the responsibility to manage the dealer’s trading capital to encourage market flows and facilitate the client orders that go into the market. Also known as a liability trader.

prospectus
A legal document that describes securities being offered for sale to the public. Must be prepared in conformity with requirements of applicable securities commissions. See also **Red Herring** and **Final Prospectus**.

protection mandate

A mandate in Quebec that provides instructions regarding the treatment a person wishes to receive in the event of a terminal illness or incurable injury.

protective provision

Covenant clauses that secure the bond.

proxy

Written authorization given by a shareholder to someone else, who need not be a shareholder, to represent him or her and vote his or her shares at a shareholders' meeting.

prudent portfolio approach

An investment standard. In some provinces, the law requires that a fiduciary, such as a trustee, may invest funds only in a list of securities designated by the province or the federal government. In other provinces, the trustee may invest in a security if it is one that an ordinary prudent person would buy if he were investing for the benefit of other people for whom he felt morally bound to provide. Most provinces apply the two standards.

public corporation

A company whose shares are listed on a stock exchange or traded over the counter.

public float

That part of the issued shares that are outstanding and available for trading by the public, and not held by company officers, directors, or investors who hold a controlling interest in the company. A company's public float is different from its **outstanding shares** as it also excludes those shares owned in large blocks by institutions.

purchase fund

A fund set up by a company to retire through purchases in the market a specified amount of its outstanding **preferred** shares or debt if purchases can be made at or below a stipulated price. See also **Sinking Fund**.

put option

A right to sell the stock at a stated price within a given time period. Those who think a stock may go down generally purchase puts. See also **Call Option**.

qualifying transaction

A transaction to purchase a business that allows a capital pool company to qualify for listing on the TSX Venture Exchange.

quantitative analysis

A form of technical analysis that relies on statistics to construct indicators and has thus been greatly enhanced by computer technology.

quick ratio

A more stringent measure of liquidity compared with the **current ratio**. Calculated as **current assets** less inventory divided by **current liabilities**. By excluding inventory, the ratio focuses on the company's more liquid assets.

quotation or quote

The highest bid to buy and the lowest offer to sell a security at a given time. Example: A quote of 45.40–45.50 means that 45.40 is the highest price a buyer will pay and 45.50 the lowest price a seller will accept.

rally

A brisk rise in the general price level of the market or in an individual stock.

random walk theory

The theory that stock price movements are random and bear no relationship to past movements.

rate of return

See **Yield**.

rate-reset preferred shares

Rate-reset preferred shares have an initial 5-year term during which shareholders are paid a fixed dividend rate based on the yield to maturity on the 5-year benchmark Government of Canada bond plus a spread. The spread represents the market's view of the issuer's credit worthiness at the time the preferred shares are issued, with a smaller spread indicating superior credit worthiness compared to a larger spread. At the end of the initial five-year term, and every five years thereafter, the issuer can call the shares for redemption at the initial offer price. If the issuer does not call the shares, shareholders have the option to keep the preferred share but with a dividend rate for the next five-year period reset to the current yield to maturity on the 5-year benchmark GoC bond plus the same spread that was used to determine the fixed rate during the initial five-year period, or exchange the fixed-rate preferred share for a floating-rate preferred share.

ratio withdrawal plan

A systematic withdrawal plan where the investor receives an annual income from the fund by redeeming a specified percentage of fund holdings each year.

rational expectations hypothesis

School of economic theory which argues that investors are rational thinkers and can make intelligent economic decisions after evaluating all available information.

real estate investment trust (REIT)

An investment trust that specializes in real estate related investments including mortgages, construction loans, land and real estate securities in varying combinations. A REIT invests in and manages a diversified portfolio of real estate.

real gross domestic product

Gross Domestic Product adjusted for changes in the price level. Also referred to as constant dollar GDP.

real interest rate

The **nominal rate** of interest minus the percentage change in the **Consumer Price Index** (i.e., the rate of inflation).

real rate of return

A rate of return adjusted for the effects of inflation.

real return bond

The coupon payments and principal repayment are adjusted for inflation to provide a fixed real coupon rate.

record date

The date on which a shareholder must officially own shares in a company to be entitled to a declared **dividend**. Also referred to as the date of record.

red herring prospectus

A preliminary **prospectus** so called because certain information is printed in red ink around the border of the front page. It does not contain all the information found in the **final prospectus**. Its purpose: to ascertain the extent of public interest in an issue while it is being reviewed by a securities commission.

redeemable bond

A clause that allows issuers the right, but not the obligation, to pay off the bond before maturity. Also known as a callable bond.

redemption

The purchase of securities by the issuer at a time and price stipulated in the terms of the securities. See also **Call Feature**.

redemption price

The price at which **debt** securities or **preferred** shares may be redeemed, at the option of the issuing company.

redeposit

An open-market cash management policy pursued by the Bank of Canada. A redeposit refers to the transfer of funds from the Bank to the direct clearers (an injection of balances) that will increase available funds. See also **Drawdown**.

registered bond

See **Registered Security**.

registered education savings plans (RESPs)

A type of government sponsored savings plan used to finance a child's post-secondary education.

registered pension plan (RPP)

A trust registered with Canada Revenue Agency and established by an employer to provide pension benefits for employees when they retire. Both employer and employee may contribute to the plan and contributions are tax-deductible. See also **Defined Contribution Plan** and **Defined Benefit Plan**.

registered retirement income fund (RRIF)

A tax deferral vehicle available to **RRSP** holders. The planholder invests the funds in the RRIF and must withdraw a certain amount each year. Income tax would be due on the funds when withdrawn.

registered retirement savings plan (RRSP)

An investment vehicle available to individuals to defer tax on a specified amount of money to be used for retirement. The holder invests money in one or more of a variety of investment vehicles which are held in trust under the plan. Income tax on contributions and earnings within the plan is deferred until the money is withdrawn at retirement. RRSPs can be transferred into Registered **Retirement Income Funds** upon retirement.

registered security

A security recorded on the books of a company in the name of the owner. It can be transferred only when the certificate is endorsed by the registered owner. Registered debt securities may be registered as to principal only or fully registered. In the latter case, interest is paid by cheque rather than by coupons attached to the certificate. See also **Bearer Security**.

registrar

Usually, a trust company appointed by a company to monitor the issuing of **common** or **preferred** shares. When a transaction occurs, the registrar receives both the old, cancelled certificate and the new certificate from the transfer agent and records and signs the new certificate. The registrar is, in effect, an auditor checking on the accuracy of the work of the transfer agent, although in most cases the registrar and transfer agent are the same trust company.

regular delivery

The date a securities trade settles – i.e., the date the seller must deliver the securities. See also **Settlement Date**.

regular dividends

A term that indicates the amount a company usually pays on an annual basis.

reinvestment risk

The risk that interest rates will fall causing the cash flows on an investment, assuming that the **cash flows** are reinvested, to earn less than the original investment. For example, **yield to maturity** assumes that all interest payments received can be reinvested at the yield to maturity rate. This is not necessarily true. If interest rates in the market fall the interest would be reinvested at a lower rate. Reinvestment risk recognizes this risk.

relationship disclosure

A written document provided to the client that includes any information that a reasonable client would consider important about the relationship between the client and the mutual fund dealer and its sales representative.

relative value strategies

A type of hedge fund that attempts to profit by exploiting irregularities or discrepancies in the pricing of related stocks, bonds or derivatives.

reporting issuer

Usually, a corporation that has issued or has outstanding securities that are held by the public and is subject to continuous disclosure requirements of securities administrators.

research associate

Reports to a senior analyst, mainly builds financial or pricing models, conducts industry or company research and helps write reports and commentary.

reset

A contract provision which allows the **segregated fund** contract holder to lock in the current market value of the fund and set a new maturity date 10 years after the reset date. Depending on the contract, the reset dates may be chosen by the contract holder or be triggered automatically.

resistance level

The opposite of a **support level**. A price level at which the security begins to fall as the number of sellers exceeds the number of buyers of the security.

responsible designated trader (RDT)

Individual assigned by the dealer to carry out market making duties on a stock.

responsible investment

Responsible investment refers to the incorporation of environmental, social and governance factors into the selection and management of investments.

restricted shares

Shares that participate in a company's earnings and assets (in liquidation), as **common** shares do, but generally have restrictions on **voting rights** or else no voting rights.

retail firm

Retail firms are investment dealers that serve only retail clients. Retail firms include full-service firms and discount brokers. Full-service firms offer a wide variety of products and services for the retail investor. Discount brokers execute trades for retail clients at a reduced rate, but do not provide investment advice.

retail investor

Individual investors who buy and sell securities for their own personal accounts, and not for another company or organization. They generally buy in smaller quantities than larger **institutional investors**.

retained earnings

The cumulative total of annual earnings retained by a company after payment of all expenses and **dividends**. The earnings retained each year are reinvested in the business.

retractable or retraction

A feature which can be included in a new **debt** or **preferred** issue, granting the holder the option under specified conditions to redeem the **security** on a stated date – prior to maturity in the case of a bond.

retractable bond

A bond that grants the holder the option under specified conditions to force the issuer to redeem the debt security.

return on common equity

A **profitability ratio** expressed as a percentage representing the amount earned on a company's **common shares**. Return on equity tells the investor how effectively their money is being put to use.

revenue

A company's income earned during a specific period of time.

reversal patterns

Formations that usually precede a sizeable advance or decline in stock prices.

reverse stock split

A process of retiring old shares with fewer shares. For example, an investor owns 1,000 shares of ABC Inc. pre-split. A 10 for 1 reverse split or **consolidation** reduces the number held to 100. Results in a higher share price and fewer shares outstanding.

revocable beneficiary

A beneficiary whose entitlements under the **segregated fund** contract can be terminated or changed without his or her consent.

revocable designation

A contract where the beneficiary's entitlements under the **segregated fund** contract can be terminated or changed without his or her consent.

rights

A short-term privilege granted to a company's **common** shareholders to purchase additional common shares, usually at a discount, from the company itself, at a stated price and within a specified time period. Rights of listed companies trade on stock exchanges from the **ex-rights** date until their expiry.

right of action for damages

Most securities legislation provides that those who sign a prospectus may be liable for damages if the prospectus contains a misrepresentation. This right extends to experts e.g., lawyers, auditors, geologists, etc., who report or give opinions within the text of the document.

right of redemption

A mutual fund's shareholders have a continuing right to withdraw their investment in the fund simply by submitting their shares to the fund itself and receiving in return the dollar amount of their **net asset value**. This characteristic is the hallmark of mutual funds. Payment for the securities that have been redeemed must be made by the fund within three business days from the determination of the net asset value.

right of rescission

The right of a purchaser of a new issue to rescind the purchase contract within the applicable time limits if the **prospectus** contained an untrue statement or omitted a material fact.

right of withdrawal

The right of a purchaser of a new issue to withdraw from the purchase agreement within two business days after receiving the prospectus.

risk-adjusted rate of return

A measure of how much risk is involved to produce a return. Risk-adjusted measures can be applied to individual securities as well as to portfolios.

risk analysis ratios

Financial ratios that show how well the company can deal with its debt obligations.

risk arbitrage strategy

Investing simultaneously in long and short positions of the common stock of companies involved in a proposed merger or acquisition, usually involving taking a long position in the company being acquired and a short position in the acquiring company. Also known as merger strategy.

risk-averse

Descriptive term used for an investor unable or unwilling to accept the probability or chance of losing capital. See also **Risk-Tolerant**.

risk capacity

A client’s ability to endure a potential financial loss.

risk-free rate of return

The rate of return an investor would receive if he or she invested in a risk-free investment, such as a **treasury bill**.

risk premium

A rate that has to be paid in addition to the **risk-free rate** (T-bill rate) to compensate investors for choosing securities that have more risk than T-Bills.

risk tolerance

A client’s willingness to accept risk.

robo-advisor

An online investment service that provides clients with automated investment advice.

roll-over risk

The risk that the issuer will be unable to refinance or renew the underlying assets when an asset-backed security matures.

roll yield loss

The loss that results when a near-term futures contract approaches expiration and is rolled over into more distant contract.

rules-based ETF

Take a goal-oriented approach, rather than following a standard index. Rules-Based ETFs might follow on areas of the market that offer higher returns or lower risks than traditional indexes.

sacrifice ratio

Describes the extent to which **Gross Domestic Product** must be reduced with increased unemployment to achieve a 1% decrease in the inflation rate.

sales finance company

Purchases, at a discount, instalment sales contracts from retailers and dealers when such items as new cars and appliances are bought on instalment plans.

sampling

The process by which the portfolio manager selects a smaller sample of securities and their weighting to best match the performance of the overall index.

satellite holdings

Holdings that are focused on riskier sectors of the markets. Satellite holdings are used to boost returns above the core asset returns.

savings bank

A financial institution whose main role is to accept savings deposits and pay interest on those deposits. Usually set up by a government and is similar in function to a credit union.

schedule I bank

Canadian-owned banks. The largest 6 banks in Canada out-distance the asset size of other Canadian-owned banks. Schedule I banks are regulated by the Bank Act.

schedule II bank

Banks that are incorporated and operate in Canada as federally regulated foreign bank subsidiaries. Schedule II banks are regulated by the Bank Act.

schedule III bank

Banks that are federally regulated foreign bank branches of foreign institutions that have been authorized under the Bank Act to do banking business in Canada.

seasonal unemployment

Unemployment that results from a company or industry that only operates during specific seasons of the year.

secondary market

The market where securities are traded through an exchange or **over-the-counter** subsequent to a **primary offering**. The proceeds from trades in a secondary market go to the selling dealers and investors, rather than to the companies that originally issued the shares in the **primary market**.

secondary offering

Refers to the redistribution or resale of previously issued securities to the public by a dealer or investment dealer syndicate. Usually a large block of shares is involved (e.g., from the settlement of an estate) and these are offered to the public at a fixed price, set in relationship to the stock’s market price.

second-order risk

Second-order risks Include liquidity, leverage, deal break, default, counterparty, trading, concentration, pricing model, and trading model risks. Unlike first-order risk, second-order risk is not related to the market but to other aspects of trading such as dealing, implementing arbitrage structures, or pricing illiquid or infrequently valued securities.

sector rotation

A top-down approach to investment, focusing on analyzing the prospects for the overall economy and investing in those sectors that are expected to outperform.

securities

Paper certificates or electronic records that evidence ownership of **equity** (**stocks**) or debt obligations (**bonds**).

securities acts

Provincial Acts administered by the securities commission in each province, which set down the rules under which securities may be issued and traded.

securities administrator

A general term referring to the provincial regulatory authority (e.g., Securities Commission or Provincial Registrar) responsible for administering a provincial Securities Act.

Securities and Exchange Commission (SEC)	A federal body established by the United States Congress, to protect investors in the U.S. In Canada there is no national regulatory authority; instead, securities legislation is provincially administered.
securities eligible for reduced margin	Securities which demonstrate sufficiently high liquidity and low-price volatility based on meeting specific price risk and liquidity risk measures.
securitization	Refers in a narrow sense to the process of converting loans of various sorts into marketable securities by packaging the loans into pools. In a broader sense, refers to the development of markets for a variety of **debt** instruments that permit the ultimate borrower to bypass the banks and other deposit-taking institutions and to borrow directly from lenders.
segregated funds	Insurance companies sell these funds as an alternative to conventional **mutual funds**. Like mutual funds, segregated funds offer a range of investment objectives and categories of securities e.g. equity funds, bond funds, balanced funds etc. These funds have the unique feature of guaranteeing that, regardless of how poorly the fund performs, at least a minimum percentage (usually 75% or more) of the investor's payments into the fund will be returned when the fund matures.
self-directed broker	Also known as discount brokers. Self-directed brokers offer discounted transaction costs and do not provide investment advice to investors.
self-directed registered retirement savings plan	A type of RRSP whereby the holder invests funds or contributes certain acceptable assets such as securities directly into a registered plan which is usually administered for a fee by a Canadian financial services company.
self-regulatory organization (SRO)	An organization recognized by the Securities Administrators as having powers to establish and enforce industry regulations to protect investors and to maintain fair, equitable, and ethical practices in the industry and ensure conformity with securities legislation. Canadian SROs include the **Investment Industry Regulatory Organization of Canada** and, the **Mutual Fund Dealers Association**.
selling group	Investment dealers or others who assist a **banking group** in marketing a new issue of securities without assuming financial liability if the issue is not entirely sold. The use of a selling group widens the distribution of a new issue.
sell side	Refers to dealers. The term stems from the role broker/dealers play in the underwriting and distribution of new issue securities.
sentiment indicators	Measure investor expectations or the mood of the market. These indicators measure how bullish or bearish investors are.
separately managed account	

A managed product structure whereby individual accounts are created for each investor. In either case, an investment manager is guided by an investment mandate.

serial bond or debenture
See **Instalment Debenture**.

settlement
The moment of irrevocable exchange of cash and securities.

settlement date
The date on which a securities buyer must pay for a purchase or a seller must deliver the securities sold. For most securities, settlement must be made on or before the second business day following the transaction date.

share capital
The money paid in by shareholders and received by the company for the shares issued by the company.

shareholder
Someone who owns shares in a corporation.

share of profit of associates
A company's share of an unconsolidated subsidiary's revenue. The equity accounting method is used when a company owns 20% to 50% of a subsidiary.

Sharpe ratio
A ratio measure of the portfolio's risk-adjusted rate of return using standard deviation as the measure of risk.

short bias
A fund where the net position must always be short. The fund may have long positions, but on a net basis, the fund must constantly be short.

short form prospectus distribution system
This system allows reporting issuers to issue a short-form **prospectus** that contains only information not previously disclosed to regulators. The short form prospectus contains by reference the material filed by the corporation in the **Annual Information Form**.

short position
Created when an investor sells a security that he or she does not own.

short selling
The sale of a security which the seller does not own. This is a speculative practice done in the belief that the price of a stock is going to fall and the seller will then be able to cover the sale by buying it back later at a lower price, thereby making a profit on the transactions. It is illegal for a seller not to declare a short sale at the time of placing the order. See also **Margin**.

short-term bond
A bond with greater than one year but less than five years to maturity.

short-term debt
Company borrowings repayable within one year that appear in the current liabilities section of

the **statement of financial position**. The most common short-term debt items are: bank advances or loans, notes payable and the portion of funded debt due within one year.

single-manager account

A type of fee-based account that is directed by a single portfolio manager who focuses considerable time and attention on the selection of securities, the sectors to invest in and the optimal asset allocation.

simplified prospectus

A condensed prospectus distributed by mutual fund companies upon request to purchasers and potential purchasers of fund units or shares.

sinking fund

A fund set up to retire most or all of a debt or preferred share issue over a period of time. See also **Purchase Fund**.

skew

Measures the extent to which a distribution is tilted towards negative or positive returns. Positive skew indicates a tendency to obtain returns above what is observed with the normal distribution; negative skew indicates a tendency to obtain returns below the normal distribution.

small cap

Reference to smaller growth companies. Small cap refers to the size of the **capitalization** or investments made in the company. A small cap company has been defined as a company with an outstanding stock value of under $500 million. Small cap companies are considered more volatile than large cap companies.

soft-dollar arrangement

An arrangement where an investment firm purchases services via commission dollars rather than an invoice for the goods or services provided.

soft landing

Describes a business cycle phase when economic growth slows sharply but does not turn negative, while inflation falls or remains low.

soft retraction

A type of retractable preferred share where the redemption value may be paid in cash or in common shares, generally at the election of the issuer.

sole proprietorship

A form of business organization that involves one person running a business whereby the individual is taxed on earnings at their personal income tax rate.

special purpose vehicle

An entity set up to purchase and manage assets as part of an asset-backed security issue. The issuer typically controls the SPV and issues ABS securities to investors.

specific risk

The risk that the price of a specific security or a specific group of securities will change in price to a different degree or in a different direction from the market as a whole. Also known as non-systematic risk.

speculative industry

Industries in which risk and uncertainty are unusually high because analysts lack definitive information. Shares in these companies are called speculative shares.

speculator

One who is prepared to accept calculated risks in the marketplace. Objectives are usually short to medium-term capital gain, as opposed to regular income and safety of principal, the prime objectives of the conservative investor.

S&P/TSX 60 Index

Includes the 60 largest companies that trade on the TSX as measured by market capitalization and is broken down into 11 sectors that cover all S&P/TSX Index subgroups.

S&P/TSX Composite Index

A benchmark used to measure the performance of the broad Canadian equity market.

S&P/TSX Venture Composite Index

A benchmark index for the public venture capital marketplace. Managed by Standard & Poor's, it is a market capitalization-based index meant to provide an indication of performance for companies listed on the TSX Venture Exchange.

split shares

A security that has been created to divide (or split) the investment attributes of an underlying portfolio of common shares into separate components that satisfy different investment objectives. The preferred shares receive the majority of the dividends from the common shares held by the split share corporation. The capital shares receive the majority of any capital gains on the common shares.

spot price

The current cash market price of a commodity or financial instrument that is available for immediate delivery.

spousal registered retirement savings plan

A special type of RRSP to which one spouse contributes to a plan registered in the beneficiary spouse's name. The contributed funds belong to the beneficiary but the contributor receives the tax deduction. If the beneficiary removes funds from the spousal plan in the year of the contribution or in the subsequent two calendar years, the contributor must pay taxes on the withdrawn amount.

SRO

Short for self-regulatory organization such as the **Investment Industry Regulatory Organization of Canada**.

standard deviation

A statistical measure of risk. The larger the standard deviation, the greater the volatility of returns and therefore the greater the risk.

standard trading unit

A regular trading unit which has uniformly been decided upon by the stock exchanges, in most cases it is 100 shares, but this can vary depending on the price of the stock.

statement of cash flow

A financial statement which provides information as to how a company generated and spent its cash during the year. Assists users of financial statements in evaluating the company's ability to generate cash internally, repay debts, reinvest and pay dividends to shareholders.

statement of changes in equity

A financial statement that shows the total comprehensive income kept in the business year after year.

statement of comprehensive income

A financial statement which shows a company's revenues and expenditures resulting in either a profit or a loss during a financial period.

statement of financial position

A financial statement showing a company's **assets**, **liabilities** and **equity** on a given date.

statement of material facts

A document presenting the relevant facts about a company and compiled in connection with an underwriting or secondary distribution of its shares. It is used only when the shares underwritten or distributed are listed on a recognized stock exchange and takes the place of a prospectus in such cases.

stock

Ownership interest in a corporation's that represents a claim on its earnings and assets.

stock average

The arithmetic average of the current prices of a group of stocks designed to represent the overall market or some part of it.

stock dividend

A pro rata payment to common shareholders of additional common stock. Such payment increases the number of shares each holder owns but does not alter a shareholder's proportional ownership of the company.

stock exchange

A marketplace where buyers and sellers of securities meet to trade with each other and where prices are established according to laws of supply and demand.

stock index

A time series of numbers used to calculate a percentage change of this series over any period of time. Most stock indexes are value-weighted and are derived by using the total market value (i.e., market capitalization) of all stocks used in the index relative to a base period.

stock savings plan

Some provinces allow individual residents of the particular province a deduction or tax credit for provincial income tax purposes on investments made in certain prescribed vehicles. The credit or deduction is a percentage figure based on the value of investment.

stock split

An increase in a corporation's number of shares outstanding without any change in the shareholders' equity or market value. When a stock reaches a high price making it illiquid or difficult to trade, management may split the stock to get the price into a more marketable trading range. For example, an investor owns one **standard trading unit** of a stock that now trades at $70 each (portfolio value is $7,000). Management splits the stock 2:1. The investor would now own 200 new shares at a market value, all things being equal, of $35 each, for a portfolio value of $7,000.

stop buy orders
An order to buy a security only after it has reached a certain price. This may be used to protect a short position or to ensure that a stock is purchased while its price is rising.

stop loss orders
The opposite of a **stop buy order**. An order to sell a security after its price falls to a certain amount, thus limiting the loss or protecting a paper profit.

straight-line method
An accounting method of depreciation whereby an equal amount is charged each period as an expense when writing down the value of an asset over time.

straight-through processing
A continuous, real-time investment management database that tracks all security transactions and investments, and links the various operating departments of a firm.

strategic asset allocation
An asset allocation strategy that rebalances investment portfolios regularly to maintain a consistent long-term mix.

street certificate
Securities certificates that are registered in the name of the securities firm, rather than the beneficial owner.

street name
Securities registered in the name of an investment dealer or its nominee, instead of the name of the real or beneficial owner, are said to be “in street name.” Certificates so registered are known as street certificates.

strike price
The price, as specified in an option contract, at which the underlying security will be purchased in the case of a **call** or sold in the case of a **put**. See also **Exercise Price**.

strip bonds or zero-coupon bonds
Usually high quality federal or provincial government bonds originally issued in **bearer** form, where some or all of the interest **coupons** have been detached. The bond principal and any remaining coupons (the residue) then trade separately from the strip of detached coupons, both at substantial discounts from par.

structural unemployment
Unemployment that results when workers are unable to find work or fill available jobs because they lack the necessary skills, do not live where the jobs are available, or decide not to work at the wage rate offered by the market.

structured product
A passive investment vehicle financially engineered to provide a specific risk and return characteristic. The value of a structured product tracks the returns of reference security known as an underlying asset. Underlying assets can consist of a single security, a basket of securities, foreign currencies, commodities, or an index.

subordinated debenture
A type of junior **debenture**. Subordinate indicates that another debenture ranks ahead in terms of a claim on assets and profits.

subscription or exercise price

The price at which a right or **warrant** holder would pay for a new share from the company. With options the equivalent would be the **strike** price.

subsidiary

Company which is controlled by another company usually through its ownership of the majority of shares.

suitability

A registrant's major concern in making investment recommendations. All information about a client and a security must be analyzed to determine if an investment is suitable for the client in accounts where a suitability exemption does not apply.

superficial losses

Occur when an investment is sold and then repurchased at any time in a period that is 30 days before or after the sale.

supply

The quantity supplied of a good or service based on a particular price during a given period of time. The higher the price of the good or service, the greater the quantity of supply.

supply-side economics

An economic theory whereby changes in tax rates exert important effects over supply and spending decisions in the economy. According to this theory, reducing both government spending and taxes provides the stimulus for economic expansion.

support level

A price level at which a security stops falling because the number of investors willing to buy the security is greater than the number of investors wishing to sell the security.

suspension in trading

An interruption in trading imposed on a company if their financial condition does not meet an exchange's requirements for continued trading or if the company fails to comply with the terms of its listing agreement.

swap

An over-the-counter forward agreement involving a series of cash flows exchanged between two parties on specified future dates.

sweetener

A feature included in the terms of a new issue of **debt** or **preferred** shares to make the issue more attractive to initial investors. Examples include **warrants** and/or **common** shares sold with the issue as a unit or a **convertible** or **extendible** or **retractable** feature.

switching fee

A fee charged by a mutual fund when an investor exchanges units of one fund for another in the same family or fund company.

syndicate

A group of investment dealers who together underwrite and distribute a new issue of securities or a large block of an outstanding issue.

synthetic ETF

Constructed with derivatives, such as swaps, to achieve the return effect of the index. As a result, the exposure of synthetic ETFs is notional, rather than real.

System for Electronic Document Analysis and Retrieval (SEDAR)

SEDAR facilitates the electronic filing of securities information as required by the securities regulatory agencies in Canada and allows for the public dissemination of information collected in the filing process

systematic risk

A non-controllable, non-diversifiable risk that is common to all investments within a given asset class. With equities it is called **market** risk, with fixed income securities it would be **interest rate** risk.

systematic withdrawal plan

A plan that enables set amounts to be withdrawn from a **mutual fund** or a segregated fund on a regular basis.

T3 form

Referred to as a Statement of Trust Income Allocations and Designations. When a mutual fund is held outside a registered plan, unitholders of an unincorporated fund are sent a T3 form by the respective fund.

T4 form

Referred to as a Statement of Remuneration Paid. A T4 form is issued annually by employers to employees reporting total compensation for the calendar year. Employers have until the end of February to submit T4 forms to employees for the previous calendar year.

T5 form

Referred to as a Statement of Investment Income. When an incorporated fund is held outside a registered plan, shareholders are sent a T5 form by the respective fund.

tactical asset allocation

An **asset allocation** strategy that involves adjusting a portfolio to take advantage of perceived inefficiencies in the prices of securities in different asset classes or within sectors.

takeover bid

An offer made to security holders of a company to purchase voting securities of the company which, with the offeror's already owned securities, will in total exceed 20% of the outstanding voting securities of the company. For federally incorporated companies, the equivalent requirement is more than 10% of the outstanding voting shares of the target company.

target-date funds

Mutual funds that are structured on the assumption that risk tolerance declines as investors grow older. The fund pursues a growth strategy in its early years by holding more risky assets. It then gradually moves towards less risky assets as the target date approaches. The fund manager adjusts the fund over time, without any action required from the fund holder. Also called *target-based funds or life-cycle funds*.

tax-free savings account (TFSA)

A savings vehicle whereby income earned within a TFSA will not be taxed in any way throughout an individual's lifetime. In addition, there are no restrictions on the timing or amount of withdrawals from a TFSA, and the money withdrawn can be used for any purpose.

tax loss selling

Selling a security for the sole purpose of generating a loss for tax purposes. There may be times when this strategy is advantageous but investment principles should not be ignored.

technical analysis

A method of market and security analysis that studies investor attitudes and psychology as revealed in charts of stock price movements and trading volumes to predict future price action.

term deposit

Money invested for a fixed term for a fixed rate of return at a deposit-taking institution.

term to maturity

The length of time that a **segregated fund** policy must be held in order to be eligible for the **maturity guarantee**. Normally, except in the event of the death of the **annuitant**, the term to maturity of a segregated-fund policy is 10 years.

testator

A person who has made a will.

thin market

A market in which there are comparatively few bids to buy or offers to sell or both. The phrase may apply to a single security or to the entire stock market. In a thin market, price fluctuations between transactions are usually larger than when the market is liquid. A thin market in a particular stock may reflect lack of interest in that issue, or a limited supply of the stock.

time horizon

The period spanning the present until the next major change in the client's circumstances. Clients go through various events in their lives, each of which can represent a time horizon and a need to completely rebalance their portfolio.

tilting of the yield curve

The yield curve that results from a decline in long-term bond yields while short-term rates are rising.

time to expiry

The number of days or months or years until expiry of an option or other derivative instrument.

time to recovery

Number of months required to move from a trough to a new peak. Some alternative strategy fund managers and analysts define time to recovery as the time from peak to trough to peak.

time value

The amount, if any, by which the current market price of a **right**, **warrant** or **option** exceeds its **intrinsic value**.

time-weighted rate of return (TWRR)

A measure of return calculated by averaging the return for each subperiod in which a cash flow occurs into a return for a reporting period.

timely disclosure

An obligation imposed by securities administrators on companies, their officers and directors to release promptly to the news media any favourable or unfavourable corporate information which is of a material nature. Broad dissemination of this news allows non-insiders to trade the company's securities with the same knowledge about the company as insiders themselves. See also **Continuous Disclosure**.

top-down analysis

A type of fundamental analysis. First, general trends in the economy are analyzed. This information is then combined with industries and companies within those industries that should benefit from the general trends identified.

Toronto Stock Exchange (TSX)

The largest stock exchange in Canada with over 1,700 companies listed on the exchange.

tracking error

The simple difference between the return on an underlying index or reference asset and the return on the ETF that tracks the index or reference asset.

trade-matching elements

Details that all parties to a trade must confirm before an institutional trade can be cleared and settled.

trade payables

Money owed by a company for goods or services purchased, payable within one year. A current liability on the statement of financial position.

trade receivables

Money owed to a company for goods or services it has sold, for which payment is expected within one year. A current asset on the statement of financial position.

trade ticket

An electronic trade confirmation sent through secure, proprietary systems that contain all the necessary specifics to a transaction.

trading unit

Describes the size or the amount of the underlying asset represented by one option contract. In North America, all exchange-traded options have a trading unit of 100 shares.

trailer fee

Fee that a **mutual fund** manager may pay to the individual or organization that sold the fund for providing services such as investment advice, tax guidance and financial statements to investors. The fee is paid annually and continues for as long as the investor holds shares in the fund.

tranches

An issue of securities divided into a number of classes. Each tranche has its own level of credit risk and either a fixed or variable rate of return. The tranches are sold separately to investors seeing the appropriate risk-to-return opportunity.

transaction date

The date on which the purchase or sale of a security takes place.

transfer agent

An agent, usually a trust company, appointed by a corporation to maintain shareholder records, including purchases, sales, and account balances. The transfer agent may also be responsible for distributing dividend cheques.

transparency

Information that is easy for everyone to perceive or detect.

Treasury bills

Short-term government debt issued in denominations ranging from $1,000 to $1,000,000. Treasury bills do not pay interest, but are sold at a discount and mature at par (100% of **face value**). The difference between the purchase price and par at maturity represents the lender's (purchaser's) income in lieu of interest. In Canada, such gain is taxed as interest income in the purchaser's hands. Also known as T-bills.

treasury shares

Authorized but unissued stock of a company or previously issued shares that have been re-acquired by the corporation. The amount still represents part of those issued but is not included in the number of shares outstanding. These shares may be resold or used as part of the option package for management. Treasury shares do not have voting rights nor are they entitled to dividends.

trend

Shows the general movement or direction of securities prices. The long-term price or trading volume of a particular security is either up, down or sideways.

trend ratio

Analysts identify trends by selecting a base period, treating the figure or ratio for that period as 100, and then dividing it into the comparable ratios for subsequent periods.

trust deed

This is the formal document that outlines the agreement between the issuer and the holders. In the case of bonds, it outlines such things as the **coupon** rate, if interest is paid semi-annually and when, and any other terms and conditions between both parties.

trust deed restriction

Restrictions set out in a trust deed. See **covenant**.

trustee

For bondholders, usually a trust company appointed by the company to protect the security behind the bonds and to make certain that all covenants of the trust deed relating to the bonds are honoured. For a **segregated fund**, the trustee administers the assets of a **mutual fund** on behalf of the investors.

TSX Alpha Exchange

An exchange that provides trading in securities listed on TSX and TSXV. Order price and volume information is publicly available. Alpha Exchange is wholly owned by TMX Group Inc.

TSX Venture Exchange

Canada's public venture marketplace, the result of the merger of the Vancouver and Alberta Stock Exchanges in 1999.

two-way security

A security, usually a **debenture** or **preferred** share, which is **convertible** into or exchangeable for another security (usually common shares) of the same company. Also indirectly refers to the possibility of profiting in the future from upward movements in the underlying common shares as well as receiving in the interim interest or dividend payments.

underemployed

People who are working part-time, often at jobs that do not make good use of their skills, when they would rather be working full-time.

underlying asset or security

The security or asset upon which a derivative contract, such as an option, is based. For example, the ABC June 35 call options are based on the underlying security ABC.

underwriting

The purchase for resale of a security issue by one or more investment dealers or underwriters. The formal agreements pertaining to such a transaction are called underwriting agreements.

unemployment rate

The percentage of the work force that is looking for work but unable to find jobs.

unified managed account

A type of fee-based account that includes the same benefits as **multi-disciplinary accounts**. Enhancements include performance reports from the respective sub-advisors, outlining distinct models contained within the single custody account.

unit

Two or more corporate securities (such as **preferred** shares and **warrants**) offered for sale to the public at a single, combined price.

unit value

The value of one unit of a **segregated fund**. The units have no legal status, and are simply an administrative convenience used to determine the income attributable to contract holders and the level of benefits payable to beneficiaries.

Universal Market Integrity Rules (UMIR)

A common set of trading rules that are applied in all markets in Canada. UMIR are designed to promote fair and orderly markets.

unlisted security

A security not listed on a stock exchange but traded on the **over-the-counter** market.

unlisted market

See **dealer market**.

unsolicited orders

An order initiated by the investor that is not based on advice provided by the advisor.

valuation day

The day on which the assets of a **segregated fund** are valued, based on its total assets less liabilities. Most funds are valued at the end of every business day.

value manager

A manager that takes a research-intensive approach to finding undervalued securities.

value ratios

Financial ratios that show the investor the worth of the company's shares or the return on owning them.

variable-rate securities

A type of security that pays interest in amounts that fluctuate to reflect changes in interest rates. If interest rates rise, so will interest payments, and vice versa.

vested

The employee's right to the employer contributions made on his or her behalf during the employee's period of enrollment.

volatility

A measure of the amount of change in the daily price of a security over a specified period of time. Usually given as the standard deviation of the daily price changes of that security on an annual basis.

voting rights

The stockholder's right to vote in the affairs of the company. Most **common** shares have one vote each. **Preferred** stock usually has the right to vote only when its **dividends** are in **arrears**. The right to vote may be delegated by the shareholder to another person. See also **Proxy**.

voting trust

An arrangement to place the control of a company in the hands of certain managers for a given period of time, or until certain results have been achieved, by shareholders surrendering their voting rights to a trustee for a specified period of time.

waiting period

The period of time between the issuance of a receipt for a preliminary prospectus and receipt for a final prospectus from the securities administrators.

warrant

A certificate giving the holder the right to purchase securities at a stipulated price within a specified time limit. Warrants are usually issued with a new issue of securities as an inducement or sweetener to investors to buy the new issue.

weighted-average method

An inventory valuation method, calculated as the cost of goods available for sale divided by the number of units available for sale.

withholding tax

An amount of income tax that a financial institution is required to deduct by law from a payment made to the owner.

working capital

Current assets minus **current liabilities**. This figure is an indication of the company's ability to meet its short-term debts.

working capital ratio

Current assets of a company divided by its **current liabilities**. Also known as the current ratio.

wrap account

Also known as a wrap fee program. A type of fully discretionary account where a single annual fee, based on the account's total assets, is charged, instead of commissions and advice and service charges being levied separately for each transaction. The account is then managed separately from all other wrap accounts but is kept consistent with a model portfolio suitable to clients with similar objectives.

writer

The seller of either a **call** or **put option**. The option writer receives payment, called a premium. The writer in then obligated to buy (in the case of a put) or sell (in the case of a call) the underlying security at a specified price, within a certain period of time, if called upon to do so.

yield – bond & stock

Return on an investment. A stock yield is calculated by expressing the annual dividend as a percentage of the stock's current market price. A bond yield is more complicated, involving annual interest payments plus amortizing the difference between its current market price and par value over the bond's life. See also **Current Yield**.

yield curve

A graph showing the relationship between yields of bonds of the same quality but different **maturities**. A normal yield curve is upward sloping depicting the fact that short-term money usually has a lower yield than longer-term funds. When short-term funds are more expensive than longer term funds the yield curve is said to be inverted.

yield to maturity

The rate of return investors would receive if they purchased a **bond** today and held it to **maturity**. Yield to maturity is considered a long-term bond yield expressed as an annual rate.

yield spread

The difference between the yields on two debt securities, normally expressed in basis points. In general, the greater the difference in the risk of the two securities, the larger the spread.

zero-coupon bonds

See **Strip Bonds**.

zero-coupon bonds plus option structure

The issuer of a PPN using the zero-coupon bond plus option structure invests most of the proceeds in a zero-coupon bond that has the same maturity as the PPN. The zero-coupon bond guarantees the return of principal at maturity. The remainder of the proceeds is invested in an option on the underlying asset.

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